

FLORA RUSTICA:

EXHIBITING

ACCURATE FIGURES OF SUCH PLANTS AS ARE
EITHER USEFUL OR INJURIOUS IN

HUSBANDRY.

DRAWN AND ENGRAVED BY

FREDERICK P. NODDER,

BOTANIC PAINTER TO HER MAJESTY,

AND COLOURED UNDER HIS INSPECTION.

WITH

SCIENTIFIC CHARACTERS, POPULAR DESCRIPTIONS,
AND USEFUL OBSERVATIONS,

BY

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OF CAMBRIDGE.

V O L. IV.

L O N D O N :

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1804.

FLORIAN RUSTICA

ACCURATE RECORDS OF THE REVENUE AS FAR
AS THE LIMIT OF THE REVENUE IS CONCERNED

HUSSELMAN

DATE AND TIME OF THE DAY

FRIDRICH R. WODDER

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ADVERTISEMENT

TO THE

FOURTH VOLUME.

THE fourth volume of the *Flora Rustica* being now completed, we have no intention of proceeding any farther in it; at least for the present. We have received the most flattering testimony to the usefulness of our work from several public societies, and many respectable individuals; but our pecuniary encouragement has not been such as to warrant our carrying it on to any great extent. We shall not stay to inquire into the reasons for this want of patronage, but submit ourselves quietly to the judgement of the Public.

Our design at setting out was to figure and describe such plants as are either useful or injurious in Husbandry; interspersing here and there some of the more remarkable Grasses; an interesting tribe of plants that have never been well figured in any one work. Our plan, we confess, has not been completed; but that it has been considerably advanced will appear from the following statement:

Of plants useful in culture or in the arts, exclusive of grasses, trefoils, and other legumes, about thirty are inserted; among which are Buckwheat, Turnep, Mustard, both black and white; Caraway, Coriander, Saffron, Plantain or Ribwort, Burnet, Oats of two sorts, Barley of two sorts, Carrot, Parsnep, Rape or Cole-feed, Flax, Potatoe, Hemp; and several vegetables that are serviceable in dying, as Weld, Woad, Agrimony, Yellow Ladies' Bedstraw, Ragwort, Corn Marygold, Blue-bottle, &c.

No less than forty species of Grasses are given in the course of the work; and fourteen of that useful genus the Trefoil. Leguminous plants, in general, either form such excellent artificial pastures, or contribute so much to strengthen natural pastures, that the knowledge of them is interesting to the husbandman; we have therefore not only figured Saintfoin and Lucerne, but we have recommended several of them to farther trial, as the Everlasting Pea, French Honeyfuckle, Purple Coronilla, and Yellow Vetchling. We have also inserted several plants of other tribes, which have been introduced partially in modern culture, as Burnet, Rib-grass, Succory, Milfoil or Yarrow, &c.

Of destructive plants or weeds infesting our pastures, we have given about twenty-seven; and of such as are found principally in arable lands, upwards of twenty. Among the former will be found Pilewort or lesser Celandine, different species of Ranunculus or Crowfoot, Ragwort, Toadflax, Cow-weed, Ox-eye or great Daisy, Burnet-

Saxifrage, Meadow Saxifrage, Rest-harrow, Knapweed, Self-heal, Yellow-rattle or Cock's-comb, and several others of less note. Among the latter are Mouse-tail Grass, Corn-salad, Dead-Nettle, Shepherd's Needle, Red Eye-bright, Corn Crowfoot, Fumitory, Corn or wild Radish, Charlock, Melilot, Corn Chamomile, Corn Feverfew, Great and small Bindweed, Knot-grass, Cleavers or Goose-grass, Cockle, Corn Marygold, Blue-bottle, Spear Thistle and Way-Thistle, Viper's Bugloss, and Wild Oats.

Although the above plants be stigmatized with the opprobrious name of weeds, yet we are not therefore to set them down as useless; many of them are serviceable in their proper places, economically or medicinally, and hence we have been led accidentally to figure several of our native plants that are or may be used in medicine; as Agrimony, Flixweed, Meadow-Saffron, Ground-Ivy, Wild Germander, Melilot, Wild Carrot, Swine's-Cress, Toad-flax, Ladies' Smock, Purging Flax, Cleavers.

All the plants in this work have been drawn and engraved, not from other plates or dried specimens, but from living subjects, and are at least faithful portraits of the individual from which they were taken. Grasses put on appearances so different in the several stages of their growth, that it is difficult to give an adequate representation of them on a single plate, especially on the small scale of an octavo page. The characters of the fructification are generally given; and thus this work, at the same time that it serves the main

purpose of rural information, may assist the Botanist in understanding the classes of the Linnean system. Thus, for

Class Diandria, see t. 66.

Triandria Monogynia, t. 24 and 58.

Digynia, Grasses, t. 4, 5, 6, &c.

Tetrandria, t. 54, 67, 104, 142.

Pentandria Monogynia, t. 62, 89, 136, 139.

Digynia, t. 38, 55, 75, 82, 83,
96, 127, 128, 141.

Pentagynia, t. 133, 134, 135.

Hexandria, t. 60.

Octandria, t. 46, 91.

Decandria, t. 105.

Dodecandria, t. 37, 40.

Polyandria, t. 21, 28, 29, 30, 56.

Didynamia Gymnospermia, t. 25, 26, 61, 137.

Angiospermia, t. 42, 93, 138.

Tetradynamia, t. 41, 49, 50, 51, 57, 70, 71,
92, 95, 101, 103.

Diadelphia Hexandria, t. 68.

Decandria, t. 1, 2, 3, 8, 9, 13,
15, 16, 19, 34, 47, 48, 52, 53, 86, 100,
115, 116, 117, 129.

Syngenesia Polyg. Æqualis, t. 131, 132, 144.

Superflua, t. 73, 74, 85, 109, 110,
123.

Frustranea, t. 111, 130.

Monoecia, t. 10, 11, 12, 69.

Dioecia, t. 140.

Polygamia Monoecia, t. 122.

Seven of the classes are] here] wanting, not to mention Cryptogamia; namely Monandria, Hep-tandria, Enneandria, Icofandria, Monadelphia, Polyadelphia, and Gynandria.

Since the commencement of our humble work, we have to congratulate our countrymen, and the civilized world at large, on the institution and progress of the Board of Agriculture, which has already done more for this most useful of all arts, than ages before had been able to accomplish.

Some of the most interesting results
of the experiments have been the
discovery of the fact that the
temperature of the water in the
reservoirs is not uniform, but
varies from the surface to the
bottom, and from the center to
the sides. This is due to the
fact that the water in the
reservoirs is not perfectly
still, but is constantly in
motion, and the temperature
of the water is therefore
affected by the motion.



Erigeron annuus L. Published, Nov. 1891, by E. R. Vail, V. B., Brewer & Co., Golden Square.

CHRYSANthemum.

SYNGENESIA Polygamia Superflua.

GENERIC CHARACTER.

Calyx hemispherical, imbricate; the marginal
scales membranaceous. *Down* margined.
Receptacle naked.

SPECIES.

Chrysanthemum Leucanthemum. *Common Ox-eye,*
or Great Daisy.

Liv. spec. 1251. *fl. suec.* 763. *Huds. angl.* 371.
Wither. arr. 928. *Curtis lond.* 5. 62. *Lightf.*
scot. 488. *Relb. cant.* 624. *Hall. belv. n.* 98.
Scop. carn. n. 1041. *Pollich. pal. n.* 812.
Allion. pedem. n. 683. *Blackw. herb. t.* 42.
Camer. epit. 635. *Ger. herb.* 509. *emac.* 634.
Park. theat. 528. 1. *Baub. hist.* 3. 114. *f.* 2,
3. *Raii hist.* 350. *syn.* 184.

SPECIFIC CHARACTER.

Leaves stem-clasping, oblong, the upper serrate,
the lower toothed.

DESCRIPTION.

ROOT perennial, somewhat creeping. Stem from 12 to 18 inches high and upwards, erect, rigid, angular, at bottom purplish and hairy, above naked, simple or little branched. Root-leaves on long petioles, obovate, scarcely pubescent, deeply serrate: stem-leaves alternate, sessile or stem-clasping, oblong-wedge-shaped or lanceolate, serrate, sometimes toothed and even pinnatifid at the base. Flowers terminating, solitary, large and showy; on peduncles finely grooved, and somewhat thicker at top. Calyx a flattened hemisphere; outer scales oblong-ovate, bluntish, the edge membranous and brown; inner lanceolate and pointed. Disk of the corolla yellow and convex: ray white and spreading, with about sixteen oblong, blunt florets, having commonly two or three notches at the end, but sometimes entire. Style, saffron-coloured. Seeds drawn to a point at the base, deeply grooved all round*.

OBSERVATIONS.

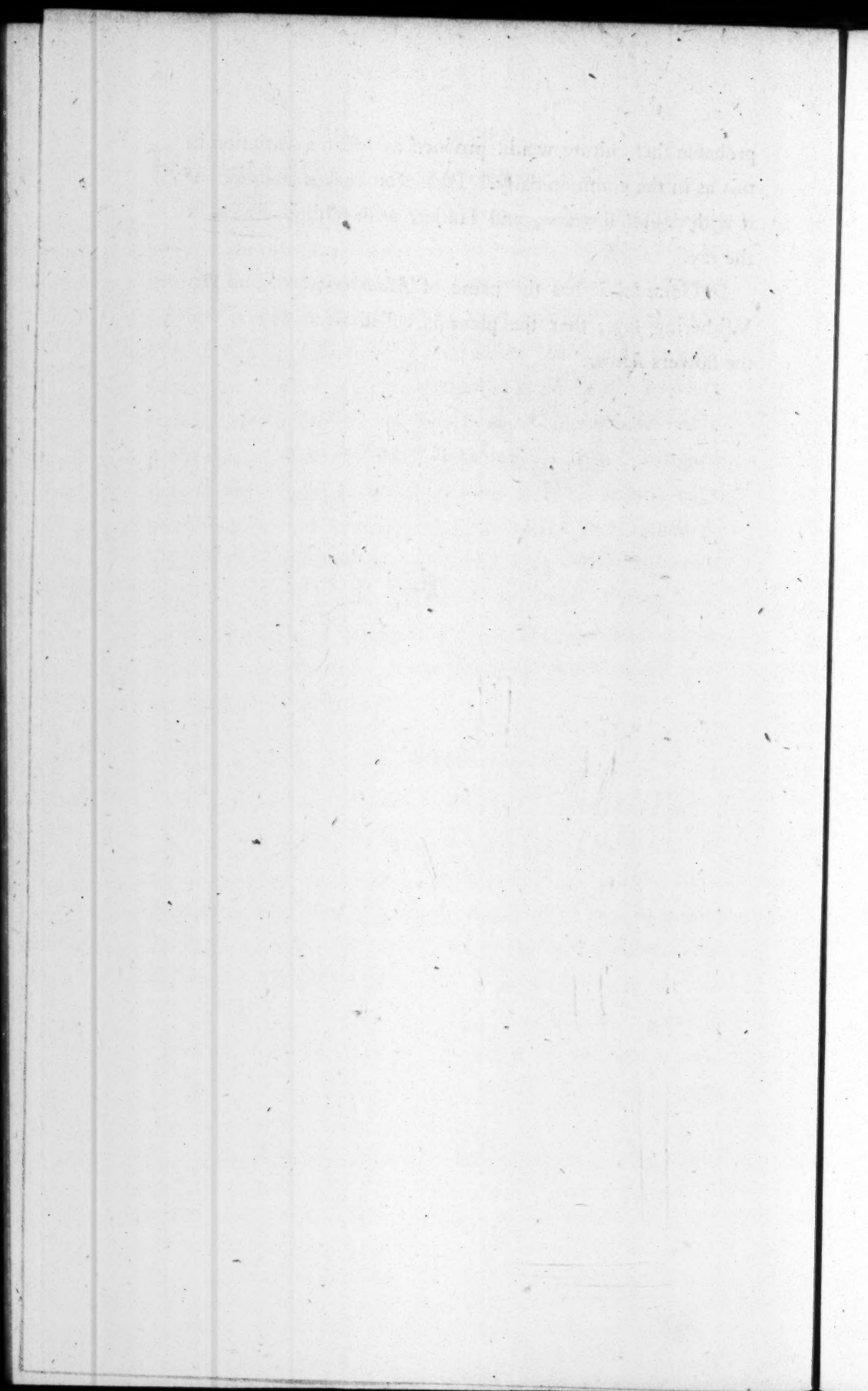
It is very common in dry pastures, sometimes on walls, and in corn fields; flowering from May to July, and increasing greatly by seed. The fresh leaves chewed have a sweetish, unpleasant, slightly aromatic taste, somewhat like Parsley, but not hot or biting: they have been recommended in disorders of the breast, and as diuretics, but are now seldom called for; some foreign physicians, however, speak of them with respect. The young leaves are sometimes eaten in salads. According to Linneus, horses, sheep, and goats eat it; cows and swine refuse it.

There are many varieties of this plant, and it is highly

* Curtis.

probable that culture would produce as great a variation in this as in the common daify. Parkinson makes mention of it with double flowers; and Haller, with fistulous florets in the ray.

In Gerarde, it has the name of *Maudlin-wort*; and Dr. Withering says, that the plant is called *Moon-flower*, and the flowers *Moons*.





Drawn, Engraved & Published Nov. 1898, by F. R. Nodder, A. 15, Brewer Street, Golden Square.

SPECIES.

Chrysanthemum fegetum. *Corn Marygold.*

Lin. spec. 1254. *fl. suec. n.* 762. *Huds. angl.* 371.

Wither. arr. 930. *Curtis lond. n.* 63. *Lightf.*

scot. 489. *Relb. cant. n.* 625. *Pollich. pal. n.*

814. *Clus. hist.* 1. 334. 2. *Mor. hist. f.* 6. t.

4. f. 1. row. 2. *Ger. emac.* 743. f. 1. *Park.*

theat. 1370. f. 1. *Petiv. brit. t.* 19. f. 6. *Raii*

hist. 339.

SPECIFIC CHARACTER.

Leaves stem-clasping, the upper jagged, the lower tooth-ferrate.

DESCRIPTION.

ROOT annual, slender. The whole plant smooth. Stem a foot or more in height, upright, branched. Leaves alternate, half-stem-clasping, glaucous on both sides, varying in figure, distantly ferrate towards the base, usually deeply toothed or jagged, frequently trifid at the end. Each branch is terminated by one large yellow flower. The peduncle is nearly upright, hollow, and thickened at top. Calyx convex or hemispherical, with ovate scales, lying close over each other; the inner ones gradually larger, with membranaceous edges. Florets of the ray 16 or 18, about half an inch in length, oblong, truncate, scored with two lines, and having generally three irregular teeth at the end.

Seeds oblong, truncate at each end, grooved, slightly angular, a little bent, whitish, or of a pale brown colour.

OBSERVATIONS.

Corn Marygold is an annual weed in corn fields; flowering from June to October. In Kent it is called *Yellow-bottle*; in Norfolk *Buddle*, which doubtless is a corruption of bottle; in the north of England *Goulans* or *Goldins*; and in Scotland *Gules*, *Gools*, *Guills*, or *Yellow Gowans*, from the golden colour of the flowers, which however they may give a brilliancy to fields in tillage, and please the eye of the passing traveller, as Linneus observes, are no very agreeable sight to the farmer; this plant being a very troublesome weed in sandy soils, and in some parts of Europe abounding to such a degree as almost to annihilate the crop. Linneus recommends fallowing the land one year, manuring it well, and harrowing it five days after the corn is sown, in order to extirpate this weed. With us it is commonly weeded out by hand. If it be cut when young in flower, and dried, horses will eat it. The Germans use it for dying yellow.



Diuron. Engraved & Published Nov. 1840. by F. P. Vasson, N.Y. Brown & Co. Phila. & N.Y.

CENTAUREA.

SYNGENESIA Polygamia Frustranea.

GENERIC CHARACTER.

Corollas of the ray funnel-shaped, long, irregular.

Recept. bristly. Down simple. }

SPECIES.

Centaurea Cyanus. Blue-bottle.

Lin. spec. 1289. fl. suec. n. 776. Hudf. angl. 375.
 Witber. arr. 944. Lightf. scot, 498. Scop. carn.
 n. 1023. Pollich. pal. n. 824. Cyanus. Hall.
 belv. n. 191. Blackw. herb. t. 270. Lob. ic.
 546. 2. Ger. herb. 592. 2. emac. 732. 2. Park.
 theat. 482. 2. Petiv. brit. t. 22. f. 4. Mor.
 hist. f. 7. t. 25. f. 4. Bauh. hist. 3. 21. 3.
 Raii hist. 321.

SPECIFIC CHARACTER.

Calyxes ferrate, leaves linear, quite entire, the
 lowest toothed.

DESCRIPTION.

ROOT annual. Stem from one to two feet in height,
 angular, slightly tomentose, branched at top. Leaves nu-

merous, white underneath, having three parallel ribs; root-leaves toothed or even pinnatifid, the extreme segment very large. Branches one-flowered. Scales of the calyx lanceolate, the outer ones green, tinged with purple, tomentose, sharply ferrate; the inner ones entire. Florets of the ray about nine, quite barren, very wide, two-lipped, the segments lanceolate and pointed. Filaments below the anther surrounded with a villose ring. Style beneath the stigma bearded.

OBSERVATIONS.

This also is a common weed among corn, and flowers from June to August.

The expressed juice of the neutral florets makes a good ink; it also stains linen of a beautiful blue; but the colour is not permanent in any mode hitherto used. Mr. Boyle says, that the juice of the central florets, with the addition of a very small quantity of alum, makes a lasting transparent blue, not inferior to ultramarine.



Drawn Engraved & Published by F.D. Widdow, No. 15, Brewer Street, Golden Square.

AVENA.

TRIANDRIA Digynia.

GENERIC CHARACTER.

Calyx two-valved, many-flowered. *Awn* from the back of the corolla jointed, twisted.

SPECIES.

Avena flavescens. *Yellow Oat-grass*

Lin. spec. 118. *succ. n.* 103. *Huds. angl.* 53.
Wither. arr. 114. *Curtis lond.* 3. 5. *Lightf. scot.* 106. *Relb. cant. n.* 97. *Hall. belv. n.* 1497. *Pollich. Pal. n.* 124. *Leers herborn. n.* 93. *t.* 10. *f.* 5. *Schreb. gram.* 76. *t.* 9. *Scheuch. agroft.* 225. *t.* 4. *f.* 19. & 220. *t.* 4. *f.* 17.

SPECIFIC CHARACTER.

Panicle loose, calyxes three-flowered, short, all the florets awned.

DESCRIPTION.

ROOT perennial, creeping. Culm eighteen inches, or from one to two feet high, slender, upright, round, with

three or four purplish joints, about which are numerous short hairs. Leaves two lines in breadth, the upper surface hairy, the under smooth; sheath streaked, hairy especially towards the base. Panicle three inches and more in length; when in flower spreading wide, yellowish green and upright, afterwards closing, with the spikelets mostly one way, becoming yellowish, brown, and shining. The calyxes contain two or three, sometimes four florets, all awned, one sometimes abortive: valves unequal, membranous, pointed. Valves of the corolla also unequal, the least in a manner transparent, membranous, white, and bifid, the largest marked with three or four green nerves, hollow, bifid, and awned. There are two very small glumes, the length of the germ, jagged at top, which are supposed to be the necessary. From the middle of the back of the larger valve springs a straight awn, almost twice the length of the valve, which when the plant is dry becomes recurved,

OBSERVATIONS.

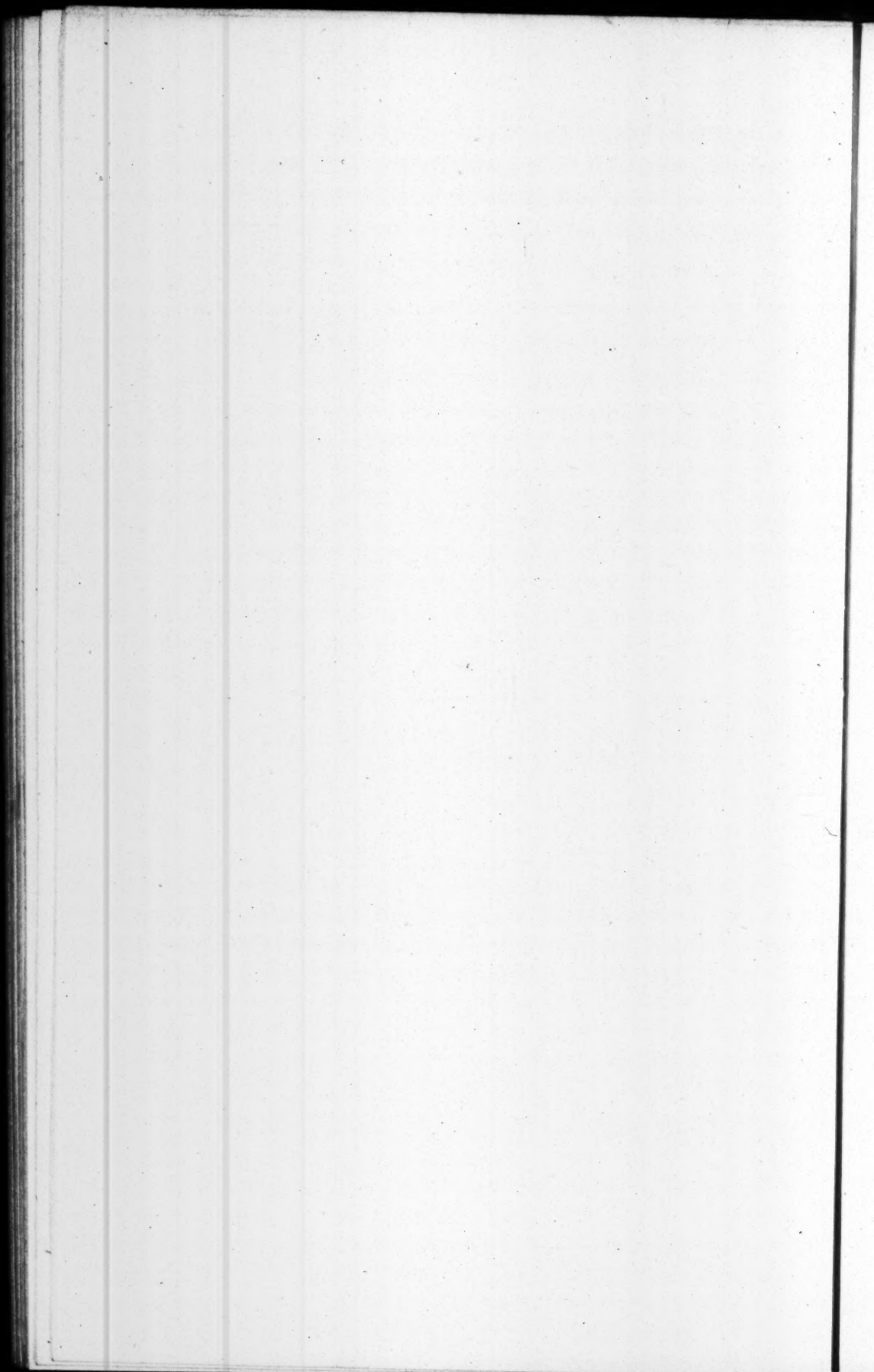
Yellow Oat-grass is easily distinguished from the other species, by its being the least of the genus commonly known, by having its panicle finely divided, and of a yellowish hue, its spikelets small and delicate, generally containing two perfect flowers, and by having its leaves and stems constantly hairy. It becomes larger when cultivated, and the spikelets have then three or four flowers.

This grass occurs in most pastures, especially high ones, in some meadows, and frequently on banks by road sides. In many counties it forms a principal part of the finest pasturage on the downs, and in some meadows contributes to the goodness as well as greatness of the crop. It is not so

early as many of the Poas, nor is it so late as some of the Agrostis genus: it is by no means unproductive, and bids fair to make a good sheep pasture*. This is one of the grasses which Mr. Miller recommends for cultivation next to the Poas or Meadow Grasses, which he prefers to all others.

For others of this genus see plates seventy-nine, eighty, and eighty-one.

* Curtis.





Drawn, Engraved & Published by T. P. Nodden, N^o 15, Brewer Street, Golden Square.

FESTUCA.

TRIANDRIA Digynia

GENERIC CHARACTER.

Calyx two-valved. *Spikelet* oblong, roundish,
with acuminate glumes.

SPECIES.

Festuca fluitans. *Flote Fescue-grass.*

Lin. spec. 111. *succ.* 95. *Huds. angl.* 46. *Witber.*
arr. 100. *Curtis lond.* 1. 7. *Relb. cant. n.* 82.
Pollich. pal. n. 107. *Leers herborn. n.* 80. *t.*
8. f. 5. *Krock. files. n.* 159. *Schreb. gram.* 37.
t. 3. *Fl. dan. t.* 237. *Stilling. misc. t.* 10.
Baub. theat. 41. *Scheuch. agr.* 199. *t.* 4. *f.* 5.
Monti, f. 35. *Loesel. pruss.* 108. *t.* 21. *Mor.*
8. 3. 16. Ger. emac. 14. *f.* 1. *Park. theat.*
1275. 8. Raii hist. 1281. *7. syn.* 412.

Poa fluitans. *Scop. carn. n.* 106. *Hall. belv.*
n. 1453.

SPECIFIC CHARACTER.

Panicle branched upright; spikelets subsessile,
cylindric, awnless.

DESCRIPTION.

ROOT perennial, striking deep into mud. Culm from one to three feet in length, or even much longer in water, creeping at bottom, and sending forth young shoots, afterwards nearly upright; covered with the sheaths of the leaves as far as the panicle. Leaves broadish and smooth; those of the young shoots upright, keel-shaped and shortish; those of the stem longer, flattish, weak and hanging down; in the Winter lying flat on the water. Panicle often more than a foot in length, generally bending down a little, sometimes forming a kind of spike, but most commonly branched; the branches sometimes pressed to the culm, sometimes diverging from it. Spikelets slender, an inch or an inch and a half in length, pressed to the stalk, containing from seven, eight, or nine, to eleven or twelve flowers. Valves of the corolla equal, the lower rather blunt, with uneven points, the upper more pointed, flat, and bifid. Nectary a small heart-shaped gland, like a scale. Stigmas much branched, but the styles not feathered to the germ. Seeds shining, olive-coloured, naked, having two little horns.

OBSERVATIONS.

When this grass has nearly done flowering, the branches of the panicle generally project from the main stalk in an acute angle; the spikelets are always pressed close to the stalk or branches of the panicle: this circumstance, joined to the length and roundness of the spikelets, sufficiently characterises this species; which is common in ditches, ponds, watery places, and slow streams, flowering all the Summer. The parts of fructification are beautiful and large enough to be viewed distinctly with the naked eye*.

* Curtis.

Horfes, kine, and fwine are all fond of this grafs. It has been recommended therefore to be fown on meadows that admit flooding: but Flote Fefcue-grafs will not flourish, except on land that is fwampy, or constantly under water.

The feeds are fmall, but very fweet and nourifhing. In Germany and Poland they are collected under the name of Manna-feeds (Schwaden), and are efteemed a delicacy in foups and gruels. When ground to meal, they make bread little inferior to that from wheat. The bran is given to horfes that have worms, keeping them from water for fome hours after. Water-fowl and fifh are very fond of them*. Trout are faid to thrive moft in fstreams where this grafs abounds. Schreber informs us, that the Manna-feeds are gathered not only from this grafs, but from *Panicum fanguinale*, or Cock's-foot Panic-grafs, and that the latter is cultivated in Germany for that purpofe.

Mr. Curtis has remarked a diforder in the ear of this grafs, fimilar to that which has been noticed by the French in Rie, and called by them *Ergot*.

* Withering and Linn. fucc.





Drawn, Engraved, & Published Dec. 1791, by F. L. Nodden, N.B. Brewer Street, Golden Square

SPECIES.

Festuca sylvatica. Wood *Fescue-grass*.

Huds. angl. ed. 1. 38. Wither. arr. 102. Fl. dan. t.

164. Mor. hist. f. 8. t. 6. f. 4. row. 3. Raii

syn. 394.

F. pinnata. β. Huds. angl. ed. 2. 48.

Bromus sylvaticus. Pollich. pal. n. 118.

B. pinnatus. Leers herborn. n. 87. t. 10. f. 3.

B. gracilis. Weigel, 1, 11.

Triticum. Hall. belv. n. 1432. & 1431. 2.

SPECIFIC CHARACTER.

Culm undivided, spikelets alternate sessile in two rows, awn as long as the corolla.

DESCRIPTION.

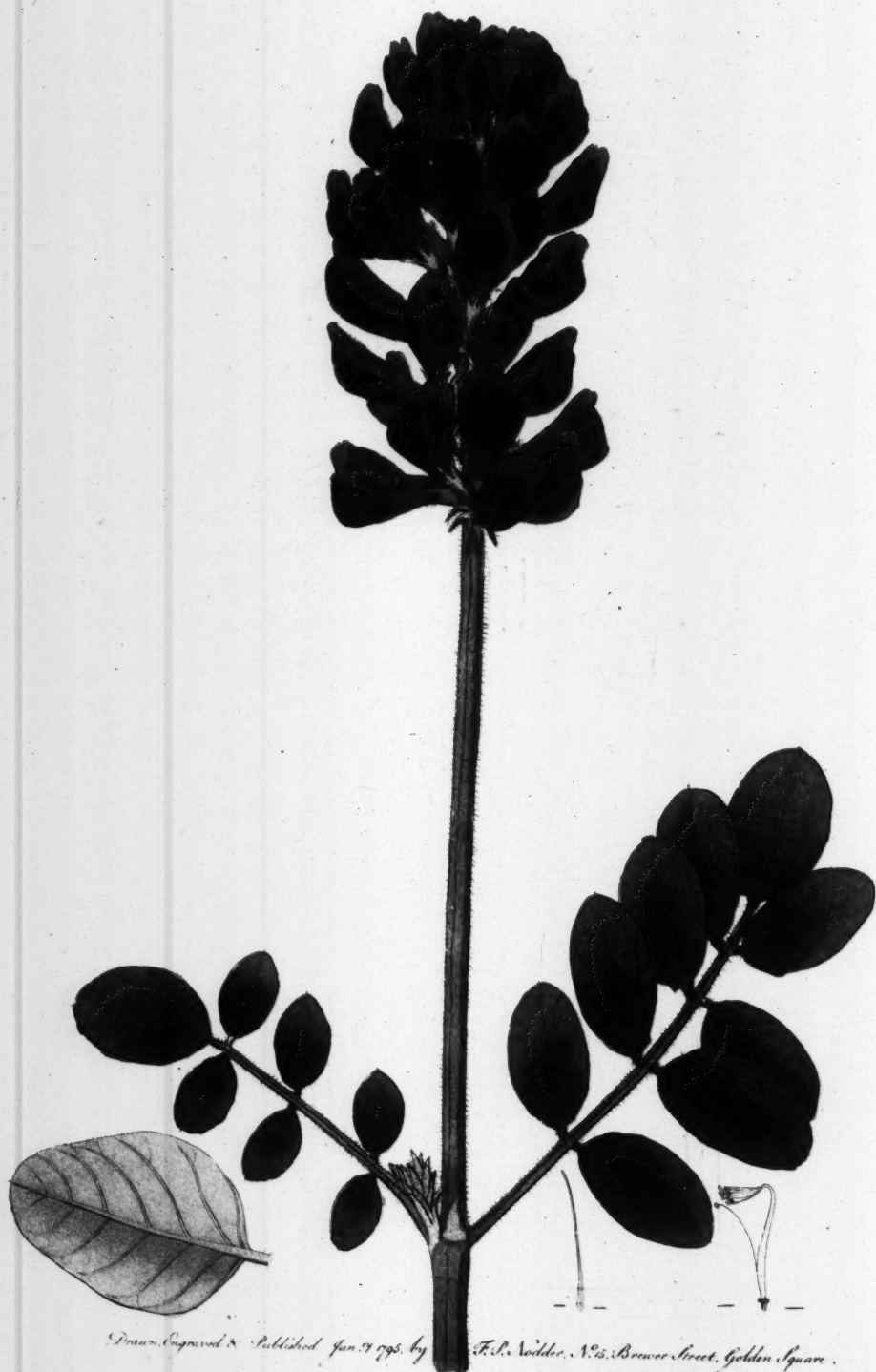
ROOT perennial. The plant in general hairy. Culms several, from eighteen inches to three feet in height, the upper part of the lower joints hairy when not covered by the sheath. Leaves from seven inches to a foot in length, five lines broad, with soft hairs generally on both sides, the lower surface less so, except towards the base, and sometimes even smooth. Panicle pendulous, from the slenderness and weakness of the peduncles. Spikelets from half an inch to an inch and a half in length, with a few short hairs on them, and nine or ten flowers in each. Valves of the calyx taper-

ing to a point, and often ending in a short awn; that of the larger valve sometimes a line long. The outer valve of the corolla is smooth along the back, but rough on the sides with minute hairs: the inner is rounded at the end, and the edges are fringed with short hairs, except at the end, which is pubescent.

OBSERVATIONS.

Botanists are not agreed respecting the genus of this grass, as may be seen by the names given above. According to Dr. Stokes, it has the habit of a *Bromus*, the artificial characters of a *Triticum*, but in its structure is truly a *Festuca*. It is thought by some to be only a variety of *Festuca pinnata*, or *Bromus pinnatus*; from which, however, it is evidently different. It is common in woods and hedges, and flowers in July. It is never cultivated, nor is it known to be of any particular use.

Two other species have been already figured in plates eighty-four and one hundred and two.



Painted, Engraved & Published Jan. 7 1795. by F. & S. Nodder, A. S. Brewer Street, Golden Square.

HEDYSARUM.

DIADELPHIA Decandria.

GENERIC CHARACTER.

Keel of the corolla transversely obtuse. Legume jointed, with one seed in each joint.

SPECIES.

Hedysarum coronarium. French Honeyfuckle.

Lin. spec. 1058. *Best. cyst. æst.* 13. t. 2. f. 1. *Rivin.*

tetr. t. 98. *Mor. hist.* 2. 129. f. 2. t. 11. f. 7.

Ger. emac. 1235. *Park. parad.* 339. t. 337. f.

10. *theat.* 1087. f. 1. *Raii hist.* 929.

SPECIFIC CHARACTER.

Legumes jointed, prickly, naked, straight, stem diffused.

DESCRIPTION.

ROOT biennial. Stems from two to three feet high, hollow, smooth, branching. Leaves pinnate, composed of five or six pairs of oval leaflets, terminated by an odd one; they are alternate, and from the angles which they form with the stem and branches come out peduncles five or six inches in length, sustaining spikes of beautiful red flowers,

which open in June and July, and perfect seeds in September, after which the roots commonly decay; but if the plants be cut down before they seed, they will last longer. The legume or pod is oblong, a little flattened; it has three roundish joints at most, with a border finely notched, and covered with a thin fungous bark, rough on the outside with little short prickles.

OBSERVATIONS.

Parkinson calls it red Sattin-flower, or red-flowered Fitchling, and says that some foolishly call it red or French Honeysuckle; the foolish name, however, has obtained.

It is a native of the Southern parts of Europe, as Spain, Italy, and Sicily. In Calabria it grows wild in great luxuriance, near four feet high, affording excellent nourishment to horses and mules, both green and made into hay: but it does not well bear the cold of the Spring, even in the North of Italy. We may presume, therefore, that it will scarcely answer the purposes of husbandry with us at large, though on a small scale it might do well on a warm spot*.

Osbeck mentions that he saw it brought into Cadiz in great bundles, as food for cattle.

It is of the same genus with Saintfoin, figured in plate 47; probably of the same quality, yielding more abundantly, but not perennial, as that is.

* Symonds in Young's Annals, 2. 161. & 3. 158.



Drawn, Engraved & Published, Jan. 7. 1795, by F. P. Nodder, A.S. Brewer Street, Golden Square.

VICIA.

DIADELPHIA *Decandria.*

GENERIC CHARACTER.

Stigma bearded transversely on the lower side.

SPECIES.

Vicia fativa. *Common Vetch* or *Tare.*

Lin. spec. 1037. *fl. suec. n.* 654. *Huds. angl.* 318.

Wither. arr. 776. *Fl. dan. t.* 522. *Rivin.*

tetr. 55. *Ger. emac.* 1227. 1. *Park. theat.*

1072. 1. *Mor. hist.* 2. 4. 12. *Eaub. hist.* 2.

310. 2. *Raii hist.* 900. 2. *syn.* 320.

SPECIFIC CHARACTER.

Legumes sessile, generally two together, upright,
leaves retuse, stipules spotted.

DESCRIPTION.

ROOT annual. Stem erect, striated. Leaves pinnate, terminated by a branched tendril, leaflets about six pairs, opposite, elliptic, blunt, and terminated by a point. Stipules in pairs, lanceolate, toothed, marked with a black shining spot. Flowers mostly in pairs, reddish purple.

In dry soils it has a procumbent stem, sharper leaflets, and

flowers mostly solitary. The stipules are spotted, but obscurely. It varies also in the colour of the seeds, from black to brown and white.

OBSERVATIONS.

The Tare or Vetch has long been cultivated in many parts of Europe chiefly for the seed, but sometimes also for green feed both of cattle and horses. For this latter purpose, and as a meliorating crop, it has obtained very much within a few years past.



Drawn, Engraved & Published Jan. 27 1795, by F. L. Nodder A. S. Brewer Street, Golden Square.

SPECIES.

Vicia Cracca. *Tufted Vetch.*

Lin. spec. 1035. *suec. n.* 652. *Huds. angl.* 317.

Witber. arr. 775. *Fl. dan. t.* 804. *Riv. tetr.*

49. *Mor. hist.* 2. 4. 1. *Raii hist.* 903. 19. *syn.*

322. *n.* 3.

SPECIFIC CHARACTER.

Peduncles many-flowered, flowers imbricate, leaflets lanceolate, pubescent, stipules entire.

DESCRIPTION.

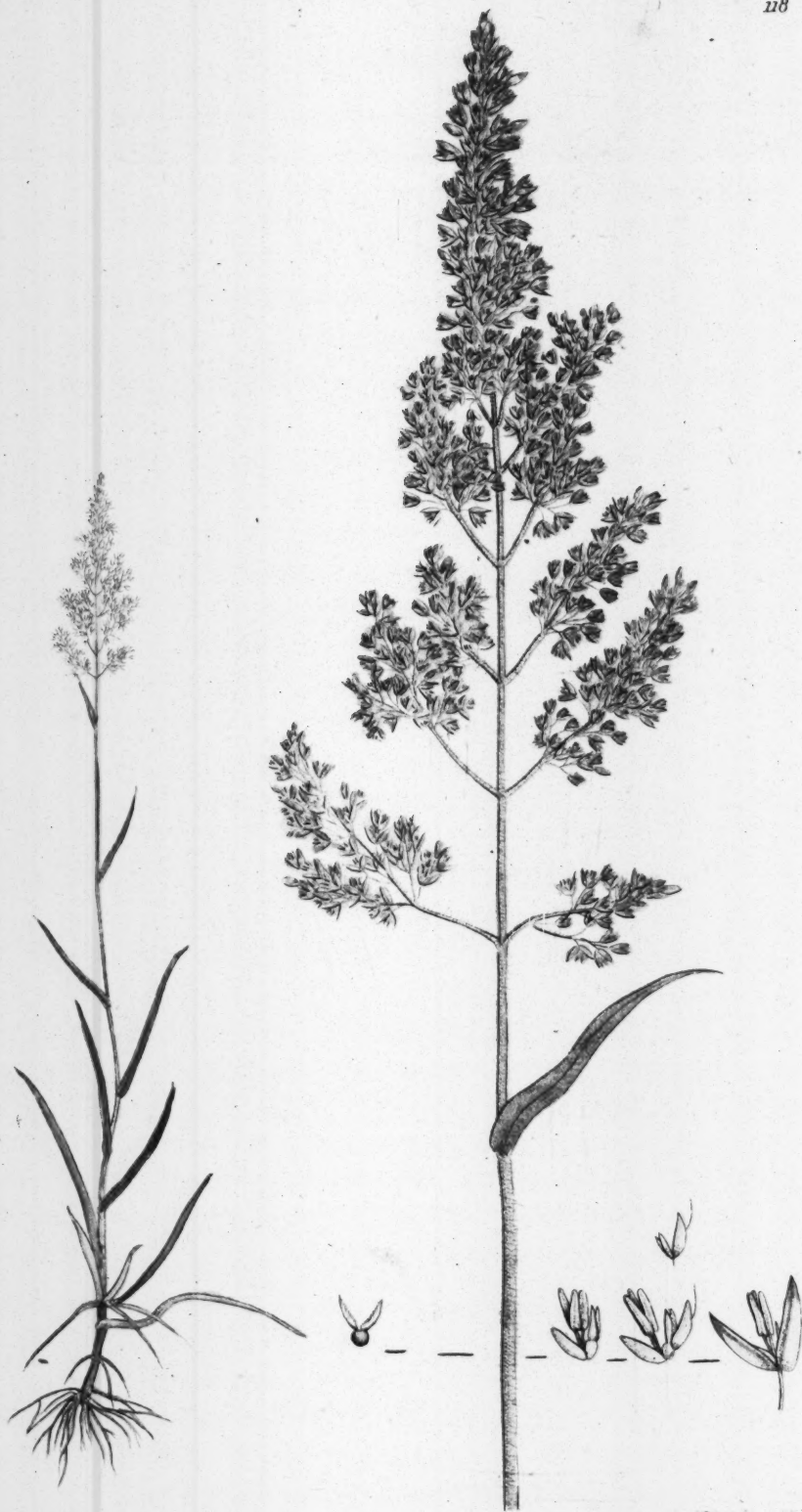
ROOT perennial. Stem quadrangular, striated, slightly hairy, three or four feet high, when climbing on bushes: branches numerous, short, alternate, from the axils of the upper leaves. Leaves alternate, very long, consisting of ten or twelve pairs of leaflets, and terminated by a branched tendril. Leaflets linear, lanceolate, oftener alternate than opposite, hairy, and terminated by a short point: at the base is a pair of semi-sagittate acute stipules. The two upper teeth of the calyx extremely short, the lowest longest, blueish. Flowers small, very numerous, hanging down, closely imbricate on one side of the common peduncle. The corolla is a blueish purple, with two deeper purple spots at the extremity of the keel: the standard is heart-shaped, without a sharp point in the notch. The legumes are about an inch long, and contain 3, 4, or 5 roundish seeds, the size of a lentil, and black when ripe.

OBSERVATIONS.

The Tufted Vetch is common in hedges, meadows, and osieholts ; flowering in July and August.

Dr. Plot, in his History of Staffordshire, says that this and the *sylvatica* or wood Vetch advance starved or weak cattle above any thing yet known. These perennial Vetches yield such abundance of feed, that they seem to deserve the notice of the agriculturist*.

* See Anderson's Essays, 2. 250. &c. Bath Memoirs, 3. 67.



HOLCUS.

POLYGAMIA Monoecia.

Natural Order of GRASSES.

GENERIC CHARACTER.

HERM. *Cal.* a one or two-flowered glume. *Cor.* an awned glume. *Stam.* 3. *Styles* 2. *Seed* 1.

MALE. *Cal.* a two-valved glume. *Cor.* none. *Stam.* 3.

SPECIES.

Holcus lanatus. *Meadow Soft-grass.*

Lin. spec. 1485. *Huds. angl.* 440. *Wilber. arr.*

1138. *Curtis, lond.* 4. *Scop. carn. n.* 1238.

Pollich pal. n. 936. *Leers herborn. n.* 770. *t.*

7. *f.* 6. *Schreb. gram.* 145. *t.* 20. *f.* 1.

Aira. Lin. succ. n. 917.

Avena. Hall. belv. n. 1484.

Gramen lanatum. Dalech. hist. 425. *Baub. hist.*

2. 466. 3.

G. pratense paniculatum molle. Baub. pin. 2.

prodr. 5. *theat.* 27. *Scheuch. agr.* 234. *t.* 4. *f.*

24. A, B. *Park. theat.* 1155. 1.

G. miliaceum pratense molle. Raii syn. 404.

SPECIFIC CHARACTER.

Glumes two-flowered, villose, hermaphrodite floret without any awn, the male floret with an awn curved back.

DESCRIPTION.

ROOT perennial, but not creeping. Stems from two to three feet high, upright, having three or four joints, pubescent, round. Leaves grayish from being covered with soft hairs, a quarter of an inch in breadth; the sheath marked on the outside with purple lines, and shining within; the ligule or membrane blunt or truncate, hairy on the outside and about the edge. Panicle at first contracted, reddish, and drooping a little, but afterwards upright, spreading, and whitish.

The velvet-like softness of the whole plant, with the redness of the opening panicle, render this grass very conspicuous.

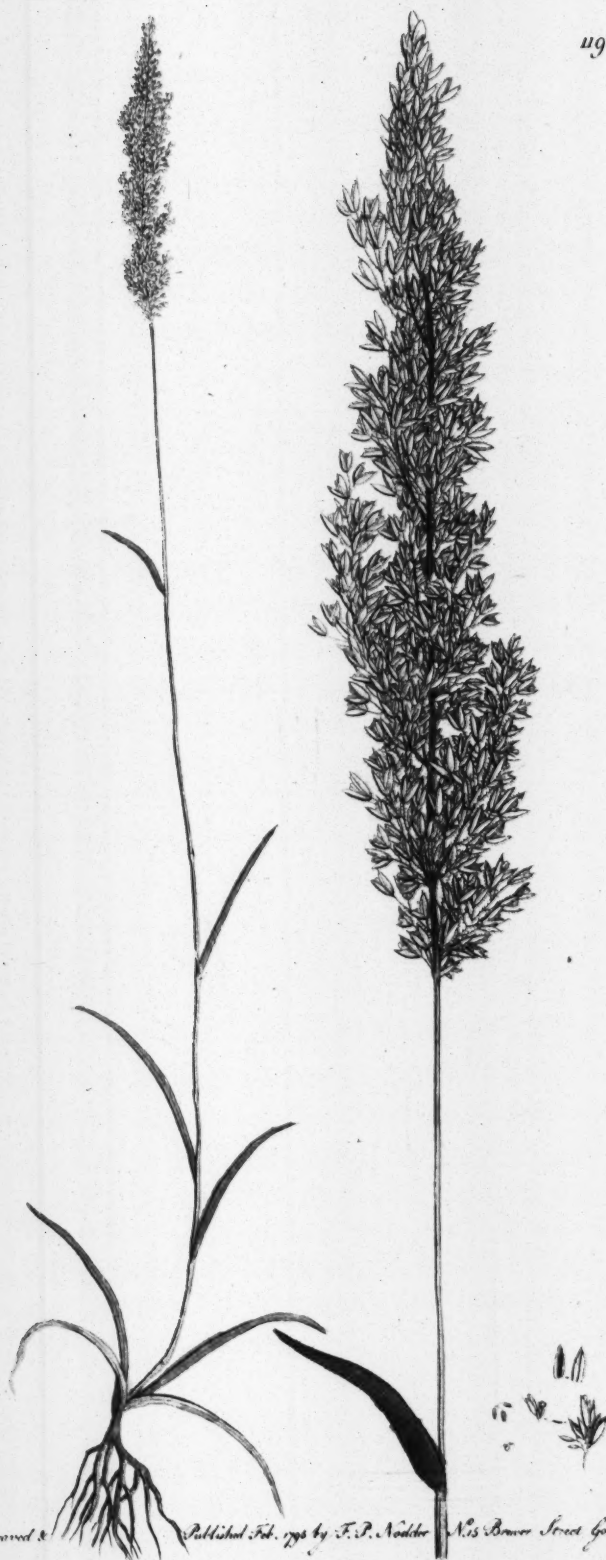
OBSERVATIONS.

It abounds in meadows, is frequent by road sides, and sometimes grows on walls; and flowers in June and July.

Haller speaks highly of this grass as food for cattle, but it is not at all esteemed among us. The seed, however, being easily collected, is sometimes sent to London in great quantities, as pure grass seed.

Mr. Lightfoot says that the stalks are used to make ropes for fishing boats in the isle of Skye; but there are better grasses for this purpose*.

* Curtis.



Drawn Engraved &

Published Feb. 1798 by F.P. A. Nodder

No. 15. Bowyer Street Golden Square.

SPECIES.

Holcus mollis. *Creeping Soft-grass.*

Lin. spec. 1485. *Huds. angl.* 440. *Wither. arr.* 1137.

Curtis lond. 5. *Leers herborn. n.* 769. *t.* 7. *f.* 7.

Schreb. gram. 149. *t.* 20. *f.* 2. *Pollich pal. n.*

937.

Avena. *Hall. belv. n.* 1485.

Gramen miliaceum aristatum molle. *Raii syn.*

404.

Gr. caninum paniculatum molle. *Raii hist.* 1285.

Scheuch. agr. 235. *t.* 4. *f.* 25.

SPECIFIC CHARACTER.

Glumes two-flowered, almost naked, hermaphrodite floret without any awn, male with a jointed awn.

DESCRIPTION.

THIS grass, which some botanists look upon as being hardly a different species from the *lanatus*, is thus well distinguished by Mr. Curtis :

It is usually a smaller plant, or if it be as tall as the foregoing, it has a much more scanty panicle. The spikelets have not that brilliant colour which marks those of the *lanatus* at their first appearance. The root creeps as much as the worst Couch-grass or Quich. The joints are woolly, and the spikelets large and pointed, with the awn much

longer than the glumes of the calyx. Both flowers are hermaphrodite, contrary to what is said in Linneus's specific character given above, and both apparently produce fertile seeds. This grass also rarely occurs but in and about woods and in hedges ; whereas the *lanatus* is a very general grass in meadows and pastures.

●BSERVATIONS.

Creeping Soft-grass flowers in July. It is a worse grass than the Meadow foot, and its creeping roots will cause it to be carefully avoided by the farmer. Ray affirms that it is very common in corn fields ; but Mr. Curtis says that he has rarely seen it in that situation.



Drawn, Engraved & Published Feb. 1795 by F. R. Nodding N. 66 Brewer Street, Golden Square.

AGROSTIS.

TRIANDRIA Digynia.

Natural Order of GRASSES.

GENERIC CHARACTER.

Cal. two-valved, one-flowered, a little less than the corolla. *Stigmas* longitudinally hispid.

SPECIES.

Agrostis stolonifera. *Creeping Bent-grass.*

Lin. spec. 93. *suec.* n. 66. *Huds. angl.* 31. *Wither. arr.* 72. *Leers herborn. t.* 4. *f.* 6. *Pollich pal.* n. 71. *Hall. belv.* n. 1473. (*Poa*) *Ger. herb.* 24. 1. *emac.* 26. 1. *Park. theat.* 1174. 4. *Bauh. hist.* 2. 480. 1.

SPECIFIC CHARACTER.

Branches of the panicle spreading, naked; culm creeping; calyxes equal.

DESCRIPTION.

THIS grass is readily distinguished by its creeping stems, putting out roots, and thus producing abundance of new plants. Its culms also or stems are first prostrate, then erect. The leaves are a line in breadth, or somewhat more. The

young panicle is contracted, but afterwards spread open. The glumes of the calyx are equal, conical, long-pointed, and tubercled on the back below the tip. The glumes of the corolla are contracted into an acute conical bag; they are sometimes white, sometimes purple.

OBSERVATIONS.

Creeping Bent-grass is perennial; and native of most parts of Europe, in moist meadows, flowering from June to August.

Mr. Hudson joins it with *capillaris*, *pumila*, *alba* and *sylvatica*, under the name of *polymorpha*.



P. 12-13-14

D. aurea, Engelm. & Schubert. March 1893. No. 1. P. 12-13-14. P. 12-13-14. P. 12-13-14.

TRIFOLIUM.

DIADELPHIA *Decandria.*

GENERIC CHARACTER.

Flowers in a sort of head. *Legume* scarcely longer than the calyx, not opening, but falling whole.

SPECIES.

Trifolium agrarium. *Hop Trefoil.*

Huds. angl. 328. *Witber. arr.* 801. *Curt. lond.* 3.
45. *Lightf. scot.* 409. *Hall. belv. n.* 363.
Scop. carn. n. 931. *Pollich pal. n.* 707. *Fl.*
dan. t. 796. *Vaill. par. t.* 22. *f.* 3. *Rivin. tetr.*
t. 10. *f.* 1. (*lupulinum*). *Baub. hist.* 2. 381.
f. 1. *Mor. hist. f.* 2. *t.* 13. *row.* 2. *f.* 1, 2.
Raii syn. 330. *n.* 16.

SPECIFIC CHARACTER.

Spikes oval imbricate, standards bent down permanent, flowers very close and numerous, stems diffused.

DESCRIPTION.

STEMS at first upright, afterwards decumbent, much branched, slightly downy. Stipules in pairs, ovate-lanceo-

late, not terminated by an awn, as most of the species are. Leaves alternate, on short footstalks; leaflets ovate or obovate, smooth, slightly serrate, the middle one on a petiolule a line or a line and a half in length; the side ones subsessile. Peduncles numerous, axillary, solitary, longer than the leaves. Flowers on short pedicels, with each a minute awl-shaped bracte, erect, yellow, after flowering becoming brown and reflected. Calyx small, with five teeth, the two upper very short, the lower longer. Standard of the corolla ovate, striated, longer than the wings, which are somewhat longer than the keel; they all remain, and inclose the short thick pod.

OBSERVATIONS.

No reference is here made to Linneus's works, because our *agrarium* is supposed to be the *procumbens* of that author, who probably regarded our *procumbens* as no more than a variety of his *filiformis*, from which, however, it clearly differs. The specimen of the *agrarium*, in the Linnean herbarium, is a much larger plant than ours; and therefore might be more profitable for cultivation. Our Hop-Trefoil, however, seems to deserve the attention of the agriculturist. It is very well named in English, the heads of flowers being larger and more like the hop than any of our Trefoils. It is common in dry pastures on a gravelly soil, flowering in June and July.

Compare this with Hop-Medick, commonly sown for sheep-feed, under the name of Trefoil, described and figured at No. 19 of this work.



42-6-8

(Drawn) Engraved & Published March 1795 by J. P. Nodder, A. S. & Co. Street, Golden Square.

VALANTIA. 7

POLYGAMIA Monoecia.

GENERIC CHARACTER.

HERM. *Cal.* none. *Cor.* four-parted. *Stam.* four.
Style bifid. *Seed* one.

MALE. *Cal.* none. *Cor.* three or four-parted.
Stam. three or four. *Pist.* obsolete.

SPECIES.

Valantia Aparine.

Lin. spec. 1491.

Galium Valantia. *Wiggers primit.* 12.

G. tricorne. *Wither. arr.* 153.

Aparine. *Vaill. par. t. 4. f.* 3.

SPECIFIC CHARACTER.

Peduncles lateral, almost naked, trifid, pedicels recurved.

DESCRIPTION.

LEAVES from 6 to 8, the upper surface smooth, the rib underneath rough. Umbels on peduncles, generally two to a whorl, opposite, dividing into three branches, not leafy at the base. The peduncles are prickly, and bear three flowers, curved downwards. Fruit roughish, beset with a number of minute tubercles, but which do not end in hairs.

OBSERVATIONS.

This plant appears to be different from *Aparine semine læ-viore* of Ray, which is commonly taken for *Galium spurium* of Linneus. It is clearly of the same natural genus with the *Galiums*, and much resembles *G. Aparine*, or common Goose-grass. We found it abundant last year (1794) among tares.



Drawn, Engraved & Published, March 1795, by J.P. Volder. No. 15, Bracken Street, Golden Square.

ACHILLEA.

SYNGENESIA *Polygamia Superflua.*

GENERIC CHARACTER.

Calyx ovate, imbricate. *Florets* of the ray about four. *Down* none. *Receptacle* chaffy.

SPECIES.

Achillea Millefolium. *Common Milfoil* or *Yarrow.*
Lin. spec. 1267. *fl. suec. n.* 770. *Huds. angl.* 374.
Wither. arr. 941. *Curtis lond. n.* 63. *Lightf. scot.* 496. *Woodv. med. bot.* 176. *t.* 64. *Hall. belv. n.* 107. *Scop. carn. n.* 1095. *Fl. dan. t.* 737. *Pollich pal. n.* 820. *Ger. herb.* 914. 1, 2. *emac.* 1072. 1, 2. *Park. theat.* 694. 1. *Petiv. brit. t.* 19. *f.* 4. *Mor. hist. f.* 6. *t.* 11. *f.* 6, 14. *Raii hist.* 345. 347. *syn.* 183.

SPECIFIC CHARACTER.

Leaves bipinnate, naked; divisions linear, toothed; stems grooved towards the top.

DESCRIPTION.

ROOT perennial, creeping. Stems a foot high or more, upright, almost round, or slightly angular; downy, branched

at top. Leaves alternate, smooth above, a little hairy underneath; very long and finely divided, composed of short pinnae 20 to 25 in number, each subdivided into from 3 to 7 pairs of pinnules, which are again cut into trifid or quinquefid lanceolate segments; those at bottom are petioled, but on the stem they are sessile, or somewhat clasping. Flowers in a close broad-topped corymb, on downy peduncles. Scales of the calyx lanceolate, with a green keel, and pale brown membranaceous edges. Florets in the disk 12 or 15; in the ray 4 or 5, slightly three-toothed; commonly white, but varying with purple of different shades. Seeds oblong, compressed, with a white edge.

OBSERVATIONS.

Common Milfoil or Yarrow is abundant in pastures and by way-sides, flowering from June to September. It has been generally execrated as a noxious weed in pastures; it is found, however, to be eaten by cattle, and to be even liked by sheep; on which account it has lately been recommended for cultivation. Perhaps this, among other herbs of pasture commonly neglected, may be of service to cattle medicinally. An ointment, made with the fresh leaves, is sometimes used in the piles, and is reckoned good against the scab in sheep. Linneus recommends the bruised herb fresh as an excellent vulnerary; and says, that the inhabitants of Dalekarlia mix it with their ale, instead of hops, to increase the inebriating quality of the liquor.



Drawn, Engraved & Published, April 1798 by F. P. Nodder N^o. 28. Brewer's Street, Golden Square.

TRITICUM.

TRIANDRIA Digynia

GENERIC CHARACTER.

Calyx two-valved, solitary, subtriflorous.

SPECIES.

Triticum repens. Common *Wheat-grass*, *Dog's-grass*, *Quick*, *Quich*, or *Couch-grass*.

Lin. spec. 128. *Huds. angl.* 57. *Wither. arr.* 128.

Hall. belv. n. 1426. *Pollich. pal. n.* 133. *Leers*

herborn. 95. *t.* 12. *f.* 3. *Schreb. gram. t.* 26.

Fl. dan. t. 748. *Mor. hist. f.* 8. *t.* 1. *f.* 8, row 3.

Raii hist. 1255. *i. syn.* 390. 1.

SPECIFIC CHARACTER.

Calyxes awl-shaped, acuminate, many-flowered (4 to 6 or 8), leaves flat, roots creeping.

DESCRIPTION.

CULMS or stalks two feet high, and where drawn up double that height, round, smooth, striated, upright, with from 3 to 5 or 6 joints, which are frequently tinged with red. Leaves pointed, from 5 to 9 inches long, 3 or 4 lines broad, waved, the lower surface smooth, the upper roughish. Ligula or strap white, very short, truncate. Sheath smooth,

except that the lower ones are slightly pubescent. Spike lanceolate, blunt, compressed, distich, 4 or 5 inches long, and near half an inch broad. Receptacle or rachis flexuose, rugged, toothed. Spikelets ovate, blunt, flattened, smooth, varying in the number of florets from 2 to 4, 5, 6, and even 8, bright or yellowish green, sometimes purplish, solitary, sessile alternately at the teeth of the rachis. Glumes of the calyx three or four lines long, either ending in a point, or in an awn, sometimes not a line, and sometimes from 2 to 4 lines in length, but never so long as the spikelet. Outer valve of the corolla five-nerved, 4 lines in length, either pointed or ending in an awn from 1 to 3 lines long; inner valve flat, except that the edge is often bent in; this is ciliate, and the end is cloven. The seed falls out of the husk.

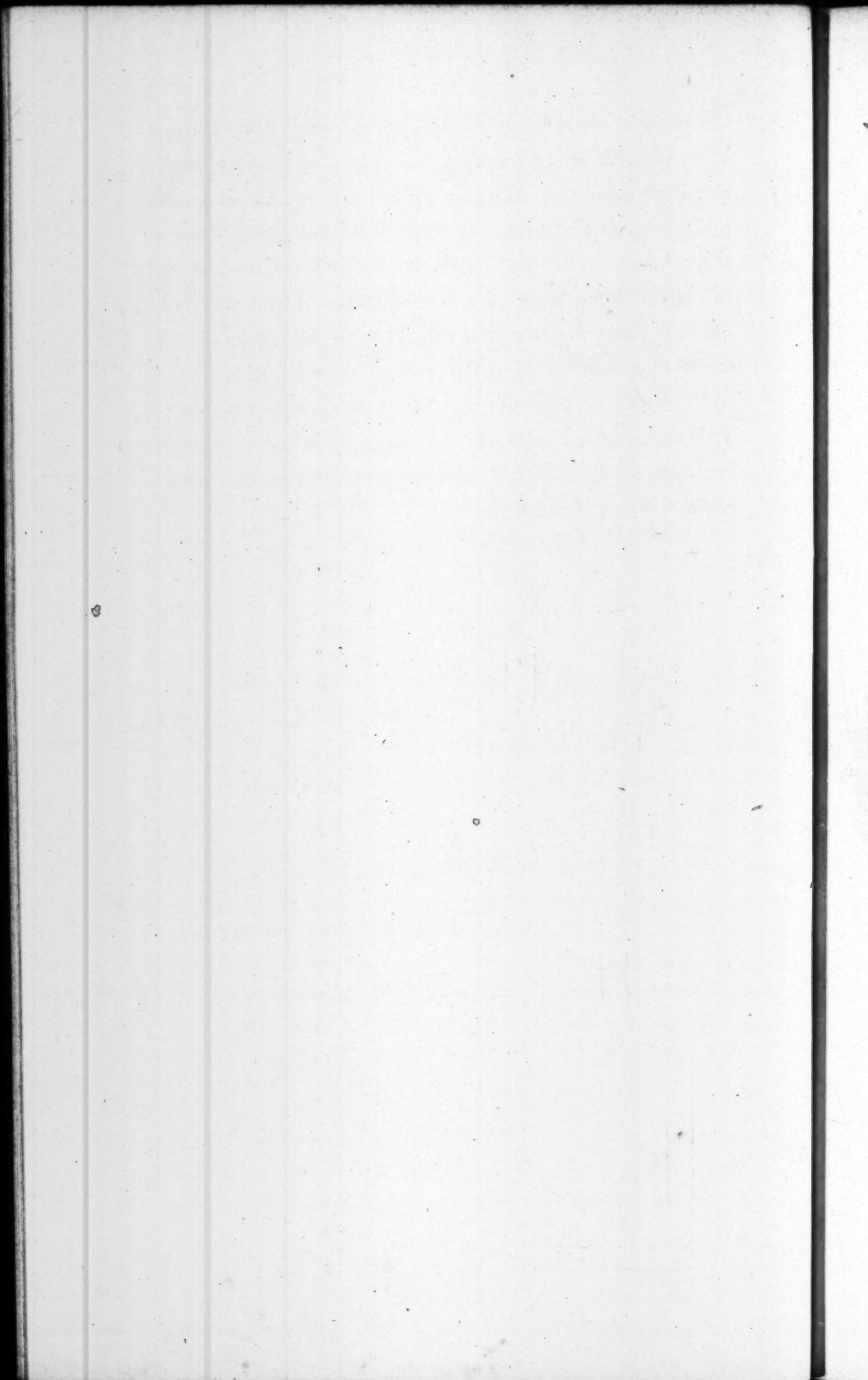
OBSERVATIONS.

This very common grass is the pest of gardens and arable lands; it abounds also in hedges. Several other grasses, however, with creeping roots are confounded with this by the husbandman, under the names of Quich, Squitch, Couch, &c. all corrupted from Quick, which signifies Living: and this grass was evidently so called, because every particle of the root will grow.

In gardens the common method of destroying it, is by forking out the roots as soon as the blade appears, or by trenching the ground very deep, and turning the quich into the bottom below the reach of vegetation. In arable land it is best got under by fallowing in a dry summer, and frequent harrowing, collecting the roots into heaps, and burning them: also by crops that require frequent hoeing.

This pest of the husbandman is not however without its use. At Naples the roots are collected in large quantities,

and fold in the markets to feed horses; they have a sweet taste, something approaching to that of liquorice: when dried and ground to meal they are said to have been made into bread in years of scarcity. The juice of them drank liberally is recommended by Boerhaave in obstructions; particularly in cases of a scirrhus liver and jaundice. Cattle are frequently found to have scirrhus livers in winter, and to be cured soon when turned out to graze in the spring. It is well known that dogs eat the leaves to excite vomiting. Mr. Miller affirms that the blade is so rough, that cattle will not feed upon it. No animals indeed seem to eat it much, except whilst it is young and tender.





Drawn, Engraved & Published, April 1795, by F. P. Nodder, N. 15, Brewer Street, Golden Square.

BROMUS.

TRIANDRIA Digynia.

GENERIC CHARACTER.

Calyx two-valved. *Spikelet* oblong, round, distich:
awn below the tip.

SPECIES.

Bromus sterilis. Barren Brome-grass.

Lin. spec. 113. *Huds. angl.* 50. *Witber. arr.* 108.
Curt. lond. 1. 9. *Pollich. pal. n.* 112. *Leers*
herborn. n. 83. *t.* 11. *f.* 4. *Hall. belv. n.* 1505.
Scop. carn. n. 113. *Krock. files. n.* 165. *Villars*
dauph. 2. 115. *Scheuch. agroft.* 258. *t.* 5. *f.* 14.
Ger. herb. 69. 1. *emac.* 76. 1. *Park. theat.*
1148. 1. *Mor. hist. s.* 8. *t.* 7. *f.* 11. *Baub. hist.*
2. 439. 2. *Raii hist.* 1289. *n.* 5. *syn.* 412. *n.* 1.

SPECIFIC CHARACTER.

Panicle spreading, spikelets oblong distich, glumes
subulate-awned.

DESCRIPTION.

ROOT annual. Culms from one to two feet high, almost
upright, round and smooth, at bottom crooked, the joints

swelled. Leaves and sheaths covered with short soft hairs. Panicle large, nodding, half a foot long. Peduncles generally simple, and swelled at their base. Spikelets two inches long, flattish, diverging towards the end, containing 6 or 7 flowers. Awn nearly twice the length of the corolla, and straight. Valves of the calyx unequal, long and narrow: outer valve of the corolla longer, seven-nerved, membranous at top, and sharply bifid; inner almost flat, ciliate. The nectary is two small acuminate glumes, with a gland at the base of each. Germ oblong, slightly emarginate at top; the bottom, whence the styles proceed, and which seems to be the true germ, smooth and shining. Seeds purplish brown.

OBSERVATIONS.

This grass is very common under hedges, and flowers in May and June. It is supposed by many to derive its name of *sterilis* or barren from the circumstance of the seeds rarely arriving at maturity; which is not true in fact. What Mr. Curtis asserts is more probable; that it has this opprobrious appellation from its inutility with respect to cattle. Ray calls it great wild Oat-grass or *Drunk*, which should probably be *Drauk*, from the Flemish *Dravich*. It is called by our common people in some counties *Black-grass*: and is a troublesome weed in Saint-foin, being so yielding as to let the scythe slip over it, ripening very early, and being very difficult to separate from Saint-foin seed. Being an annual it would answer to pull it out by the roots, where it is not too abundant.



Drawn, Engraved & Published April 1895, by F. P. Nodder, N. 15 Brewer Street, Golden Square.

SPECIES.

Bromus asper. *Rough Brome-grass.*

Lin. syst. 119. *Suppl.* 111. *Wither. arr.* 108. *Krock. files.* n. 164. t. 24.

B. nemoralis. *Hudf. angl.* 51.

B. ramosus. *Lin. syst. ed.* 13. 102. *Hudf. angl. ed.* 1. 40. *Lightf. scot.* 1087.

B. hirsutus. *Curt. lond.* 2. 8. *Relb. cant. n.* 92.

B. montanus. *Retz. obs.* 2. n. 4. *Pollich. pal. n.* 116. *Scheuch. agrost.* 253. t. 5. f. 10. *Mor. hist. f.* 8. t. 7. f. 27.

SPECIFIC CHARACTER.

Panicle branched, nodding, rugged; spikelets linear, roundish, ten-flowered, hairy-awned; culm and leaves rough with hairs.

DESCRIPTION.

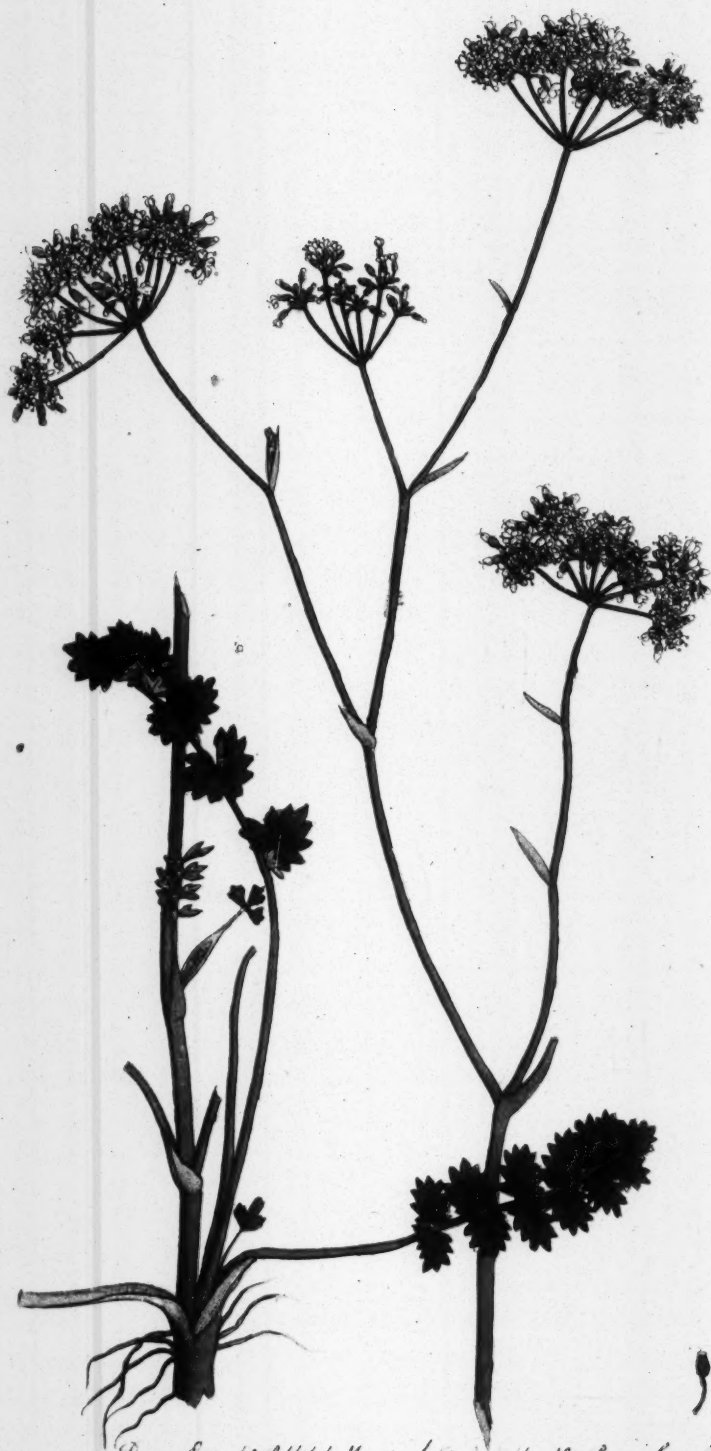
LEAVES a foot long, rough and hairy, chiefly along the edges and midrib; sheaths covered with long stiff hairs, bending back. Panicle a foot long or more, branched, and nodding one way. Peduncles very long, in pairs, rough when handled the wrong way. Spikelets more than an inch long, slender, roundish, tinged with dusky red, containing ten flowers. The larger valve of the calyx has three rough ribs on the outside, and ends in a short point; the smaller has only one rib, and a more tapering point. The outer valve of the

corolla has three prominent ribs, the middle one terminating, in a straightish awn shorter than the corolla ; the inner flattish edged with hairs and shorter.

Bromus giganteus is not usually above half the height of this, and the whole plant is much weaker and smother.

OBSERVATIONS.

Rough or hairy-stalked Brome-grass grows in hedges and woods ; and flowers from June to August. It is the tallest of our English grasses, often exceeding six feet in height ; and may be distinguished from them all by the extreme hairiness of the sheaths which almost cover the stalk. It seems to be annual ; at least the root does not creep. It appears to be much too coarse a grass for cultivation. There is much confusion in the synonyms ; and no grass has had a greater variety of names, or has been considered as more distinct species than that now before us.



Drawn, Engraved & Published, May 1790, by J. Miller & Co., Booksellers, Golden Square.

PIMPINELLA.

PENTANDRIA Digynia.

GENERIC CHARACTER.

Petals bent in. Stigmas subglobose. Fruit ovate-oblong.

SPECIES.

Pimpinella Saxifraga. Lefs Burnet-Saxifrage.

Linn. spec. 378. Hudf. angl. 127. Wither. arr. 313. Relb. cant. n. 241. Pollich. pal. n. 305. Jacqu. austr. 4. 395. Fl. dan. t. 669. Blockw. t. 472. Riv. pent. 80, 82, 83. 1. Clus. 2. 197. 2. Dod. pempt. 315. 2. Lob. obs. 413. 1. ic. 1. 719. 2. Ger. emac. 1044. 2. Park. theat. 947. 4. Raii syn. 127.

SPECIFIC CHARACTER.

Leaves pinnate; root-leaflets roundish, uppermost linear.

DESCRIPTION.

STEM upright, 18 inches high or more, round, striated, pubescent, dichotomous. Leaflets commonly serrate, but sometimes entire, and sometimes even jagged. General

umbel flattish; both that and the partial composed of from 8 to 20 rays. Corollule white, with permanent styles. Fruit striated.

OBSERVATIONS.

It is a perennial plant, common in dry gravelly pastures, flowering from midsummer through the autumn. No cattle seem to refuse it.



PEUCEDANUM.

PENTANDRIA Digynia

GENERIC CHARACTER.

Fruit ovate, striated on both sides, furrounded with a wing. *Involucres* very short.

SPECIES.

Peucedanum Silaus. *Meadow Saxifrage.*

Linn. spec. 354. *Huds. angl.* 116. *Witber. arr.* 285.

Hall. belv. n. 797. *Pollich. pal. n.* 281. *Jacqu.*

austr. 1. t. 15. *Leers herborn. n.* 197. *Ger.*

891. *emac.* 1048. 2. *Park. theat.* 904. 3. *Raii*

syn. 216. *Sefeli.*

SPECIFIC CHARACTER.

Leaflets pinnatifid, segments opposite; universal involucre two-leaved (or one-leaved, when cultivated many-leaved.)

DESCRIPTION.

ROOT perennial. Stem upright, cylindric, grooved especially towards the top, smooth tinged with red above the root, two feet high and more. Root-leaves on long, cylindric, grooved, smooth petioles. Stem-leaves on shorter petioles, which are membranaceous at the base. Lower leaves

tripinnate; the leaflets cloven into 2 or 3 lanceolate segments. General umbel has from 7 to 10 unequal rays; partial from 12 to 20 or more. Partial involucre has from 8 to 12 lanceolate leaflets, deep blackish purple at the ends. All the florets generally fertile, but some of the central ones sometimes barren. Petals pale yellow. Germ crowned with a glandular yellow receptacle, turning to a deep red as the seeds ripen.

OBSERVATIONS.

It is common in moist meadows, and flowers in July and August. Cattle do not seem to eat it.



Drawn Engraved & Published, May 1795 by F. P. Voddler, at the Broom Street, Golden Square.

ONONIS.

DIADELPHIA *Decandria.*

GENERIC CHARACTER.

Calyx five-parted, with linear segments. *Standard* striated. *Filaments* connate, without a fissure. *Legume* turgid, sessile.

SPECIES.

Ononis spinosa. *Thorny Rest-barrow.*

Huds. angl. 312. *Wither. arr.* 762. *Hort. kew.* 3.
21.

O. spinosa B. *Linn. spec.* 1006.

Hall. helv. n. 356. *Riv. tetr. t.* 69. *Blackw. t.*
301. *Mor. hist. f.* 2. *t.* 17. *f.* 3. *row* 2. *Fl.*
dan. t. 783. *Baub. hist. 2.* 391. 2. *Ger.* 1141.
1. *emac.* 1322. 1. *Park. theat.* 994. 1. *Raii*
syn. 332.

SPECIFIC CHARACTER.

Flowers axillary, in pairs; leaves ternate, the uppermost solitary; they and the branches villose.

DESCRIPTION.

STEMS decumbent, slightly hairy or woolly, reddish, thorny, especially from the base to the middle. Branches terminating in softish thorns: at the base of the young branches they are strong, but early in the summer not pungent: they are awl-shaped, with sometimes 1 or 2 leaves. Leaves almost smooth. Flowers mostly solitary, but when two they are fixed to a cloven peduncle. Calyx hairy, with awl-shaped unequal segments. Corolla twice as long as the calyx, bright purple marked with lines.

OBSERVATIONS.

Common Rest-harrow abounds in barren pastures, flowering in June and July. Sometimes it occurs in moist meadows. It has the name from the strength of its roots. It is called also Cammock, Petty Whin, and Ground Furze. The flower varies frequently to white. Sheep are said to be very fond of it; and a decoction of the roots has been recommended in cases of stone and jaundice.

We have another sort of *Ononis* like this, but without thorns. Linneus did not regard them as different species. They are, however, seldom found together, and with us at least the unarmed Rest-harrow never becomes thorny. The whole plant is more woody and rigid than *Ononis arvensis*.



Drawn, Engraved & Published June 1795, by F. P. Nodding, A.B. Brewer Street, Golden Square.

CENTAUREA.

SYNGENESIA *Polygamia Frustranea.*

GENERIC CHARACTER.

Corollas of the ray funnel-form, longer, irregular,
Down simple. Recept. bristly.

SPECIES.

Centaurea nigra. Black Centaury or Knapweed.

Lin. spec. 1288. *Huds. angl.* 375. *Wilber. arr.* 943.

Lightf. 498. *Pollich pal. n.* 822. *Villars dauph.*

3. 46. *Krock. files. n.* 1455.

Jacea. *Hall. belv. n.* 184. *Cyanus n.* 185.

J. nigra laciniata. *Baub. pin.* 271. 1. *Ger. emac.*

727. f. 1. *Park. theat.* 468. 1. *Mor. hist. f.* 7.

t. 28. f. 10. *Petiv. brit. t.* 22. f. 8, 9. *Raii*

hist. 325. 12. *syn.* 199.

SPECIFIC CHARACTER.

Calyxes ciliate, with the little scale ovate, ciliae
capillary erect, leaves lyrate-angular, flowers
floscular.

DESCRIPTION.

STEM from two to three feet in height, angular, scored,
slightly downy, often tinged with purple; branches alternate,

the uppermost in this, as well as the *Scabiosa*, rising above the stem, thickest towards the top, one-flowered. Leaves pinnatifid or toothed, sometimes entire, lanceolate, sessile, more or less downy, rough and hard. Outer scales of the calyx lanceolate, dark purple, almost black, fringed with long cilia, and these hairy; the middle rows yellow, linear at the base, with a lanceolate fringed tip: the inner scales whitish, smooth, shining, linear, terminated by a broad roundish purple scale, ragged not ciliate. Florets all alike, with a whitish, long, narrow tube, and a purple border.

OBSERVATIONS.

This plant resembles *Centaurea Jacea*, which has been confounded with it, but has no neutral ray. This, however, is not always the case; both Hudson and Stokes mention its having sometimes neutral florets in the ray. Long before them, Ray had affirmed this variety to be no less frequent than the common sort in the West of England; and Dillenius afterwards observed it near Oxford: nay, Thomas Willifell showed Ray plants which had the flowers wholly composed of neutral florets. It varies with white flowers; and with leaves entire or jagged.

It has many provincial names, as Knap-weed, Knop-weed, Knob-weed, Horfe-knops; all from Knob or Nob, a head. Also Hard-heads, Hard-irons, and Matfellow. In Scotland Horfe-knot.

It is found in Germany, Austria, France, &c. With us in England it is a bad weed among grass; being a harsh stubborn plant, seldom touched by cattle either green or dry, and being extirpated not without difficulty. It is a perennial plant, and increases much by the root.



Thistle, Cirsium & Cirsium, from the F.P. Noddy, N.B. Brown, Street, Golden Square.

CARDUUS.

SYNGENESIA *Polygamia Æqualis.*

GENERIC CHARACTER.

Calyx ovate, imbricate with spiny scales. *Recept.* hairy.

SPECIES.

Carduus lanceolatus. *Spear Thistle.*

Linn. spec. 1149. *Huds. angl.* 350. *Witber. arr.* 868.

Lightf. 850. *Engl. bot. t.* 107. *Hall. helv. n.*

169. *Scop. carn. n.* 1007. (*Cirsium.*) *Pollich*

pal. n. 762. *Leers herborn. n.* 625. *Ger. herb.*

1011. 6. *emac.* 1174. 6. *Park. theat.* 982. 9.

Mor. hist. f. 7. *t.* 31. *f.* 7. *Petiv. brit. t.* 21.

f. 7. *Baub. hist.* 3. 58. *Raii hist.* 310.

SPECIFIC CHARACTER.

Leaves decurrent, pinnatifid, hispid, divisions divaricate, calyxes acute, spiny, villose, stem hairy.

DESCRIPTION.

ROOT biennial. Stem upright, from 3 to 4 feet high, angular, downy, frequently tinged with purple. Leaves half-stem-clasping, running down to the next leaf below,

downy and sea-green underneath, hairy and deep green above, Pinnas lanceolate, the terminating one long, the side ones mostly divided to the base into two segments, one pointing upwards, the other downwards, terminating, as do also the wings of the part running down the stem, in sharp stiff white thorns, which are extensions of the rib. Calyx with numerous ranges of lanceolate scales, somewhat tomentose, ending in the same sort of thorns. Corolla purple, sometimes varying to white. Down plumose, almost as long as the floret.

OBSERVATIONS.

This is a very common Thistle by road sides and hedges, and on fallows, flowering in July. In Yorkshire it is called Bur-thistle. It is a very large succulent plant, and is but too well known on strong lands. Nothing is easier to destroy than this and most of the other Thistles, for being biennial plants, they require only to be mowed down before they perfect their seeds. It is best to do this while the plant is yet tender; but if it be delayed till the seeds are forming, it will be a proper precaution to rake the plants into heaps, and burn them. The ashes contain a considerable quantity of salts, and should be spread upon the land.



Drawn, Engraved & Published June 1795 by F. R. Veldster, N. 15, Brunschwiler, Golden Square.

SERRATULA.

SYNGENESIA *Polygamia Æqualis.*

GENERIC CHARACTER.

Calyx subcylindrical, imbricate, awnless.

SPECIES.

Serratula arvensis. Corn Saw-wort or Way-Thistle.

Lin. spec. 1149. *Huds. angl.* 349. *Wither. arr.* 867.

Leers herborn. n. 632. *Pollich pal.* n. 761.

Fl. dan. t. 644.

Carduus arvensis. *Curtis lond.*

Cirsium arvense. *Hall. belv.* n. 171. *Scop. carn.*
n. 1001.

Carduus. *Ger. emac.* 1173. 4. *Park. theat.* 959. 7.

Mor. hist. f. 7. *t.* 32. *f.* 14. *Petiv. brit. t.* 21.

f. 5. *Baub. hist.* 3. 59. 2. *Raii hist.* 310. *syn.*

194.

SPECIFIC CHARACTER.

Leaves toothed, thorny.

DESCRIPTION.

ROOT perennial, creeping. Stem three feet high or more, upright, branched, at the base round and somewhat woolly; above angular and smooth. Leaves gash-pinnatifid,

the uppermost almost entire. Flowers pale purple, varying to white, one or two together on a leafy peduncle, somewhat woolly at top. Down of the seed plumose, sessile. Receptacle hairy.

OBSERVATIONS.

This Thistle is known every where by road sides, too frequently in corn fields, and more rarely in pastures; flowering from June to August.

It has the habit of the Thistles, and is universally called so in English, though Linneus makes it a *Serratula*. It is the worst pest of arable lands, having strong creeping roots, striking down to a great depth, and then branching out horizontally, so that it is very difficult to root it out where it has once got possession. Frequent and deep ploughing in dry weather will destroy it in arable land. In pastures it should be pulled or forked out when the ground is well soaked with wet. Mr. Curtis affirms that repeated mowing or spudding, if they do not effectually overcome, will greatly enfeeble it.

To us mowing has always appeared to make it run more at the root.

The goat and ass will eat it, horses will sometimes crop the heads when young and tender, but no other cattle seem to touch it. It is said to yield a very pure vegetable alkali when burnt.



[133]

LINUM.

PENTANDRIA *Pentagynia*.

GENERIC CHARACTER.

Cal. five-leaved. *Petals* five. *Caps.* five-valved.
ten-celled. *Seeds* solitary.

SPECIES.

Linum usitatissimum. *Common Flax.*

Lin. spec. 397. *Huds. angl.* 133. *Wither. arr.* 328.
Relb. cant. n. 252. *Curtis lond.* *Hall. belv. n.*
836. *Scop. carn. n.* 381. *Blackw.* 160. *Ger.*
emac. 566. *Mpr. hist. f. 5. t. 26. f. 1. row. 2.*
Baub. hist. 3. 451. *Raii hist.* 1072. 1. & 1073.
2. *syn.* 362.

SPECIFIC CHARACTER.

Calyxes and capsules mucronate, petals crenate,
leaves lanceolate alternate, stem generally
solitary.

DESCRIPTION.

ROOT annual. Stem upright, round, smooth, leafy,
from a foot and a half to two feet in height, branched only
at top. Leaves sessile, growing closely and irregularly,
smooth, somewhat glaucous, sharp at the end, pointing up-

wards, quite entire. Peduncles one-flowered, round, smooth. Corolla large, fine sky-blue, with deeper-coloured lines, very apt to fall off. The inner edge of the calyx fringed with hairs. Anthers and styles blue.

OBSERVATIONS.

Flax is found among corn and in pastures in several parts of the kindom, but is not originally a native. It has been cultivated time immemorial in Egypt, where the land is flooded by the Nile.

The oil expressed from the seeds (cold-drawn Linseed oil) is used in medicine, &c. When heat is applied, it acquires a yellowish colour, and is used by painters and varnishers. The farinaceous part remaining after expression, called oil-cake, is used for fattening oxen. The mucilaginous infusion of the seeds is also used medicinally.

Every body knows that the fibres of the stem are manufactured into linen; and that this linen, when worn to rags, is made into paper.



SPECIES.

Linum perenne. *Perennial Flax.*

Lin. spec. 397. *Huds. angl.* 133. *Witber. arr.* 329.

Relb. cant. n. 253. *Engl. Bot.* 40. *Mill. fig.*

t. 166. *f.* 2. *Raii syn.* 362.

SPECIFIC CHARACTER.

Calyxes and capsules bluntish, leaves alternate, lanceolate, quite entire.

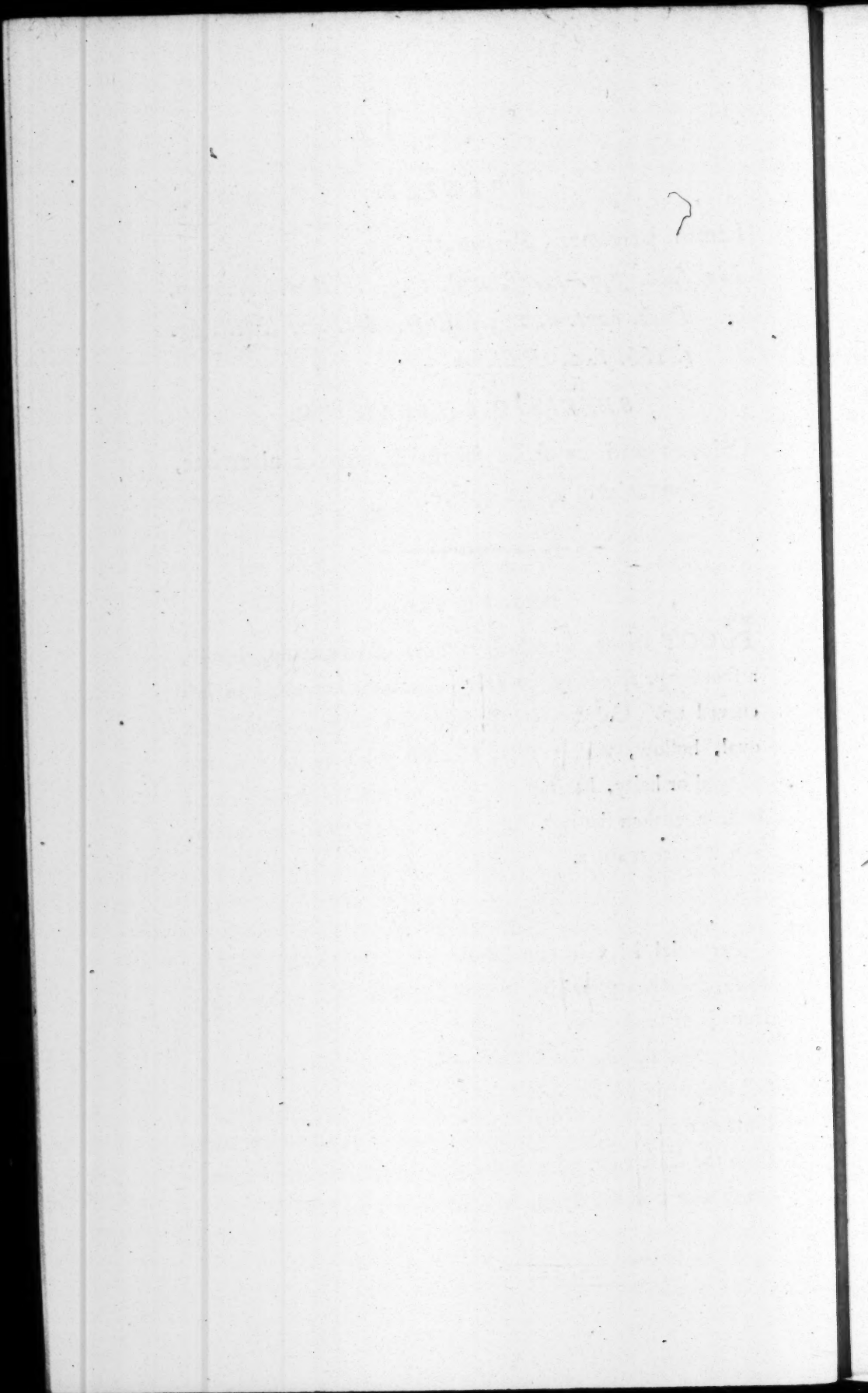
DESCRIPTION.

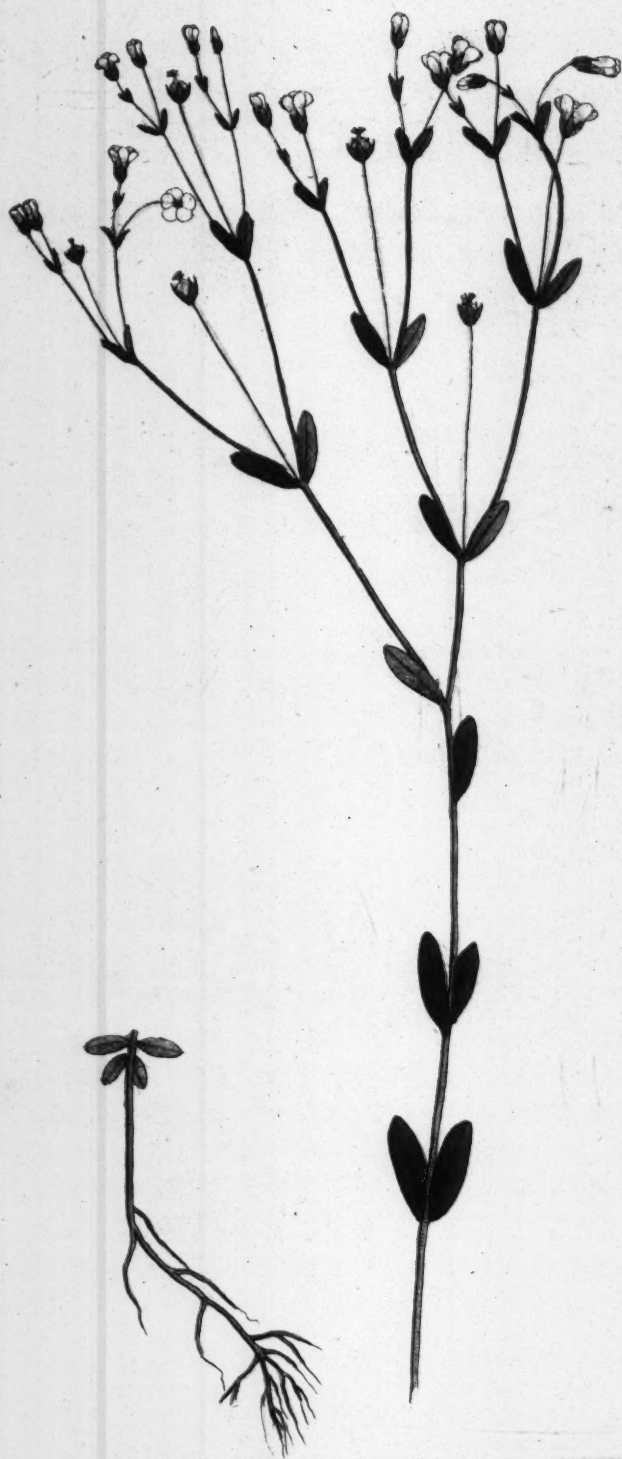
ROOT strong, knobbed, woody. Stems many, slender, a foot long, spreading in every direction, but more or less curved up. Calyx quite smooth and entire; each leaflet oval, hollow, with a short bluntish point at the end, not fringed or hairy, having five ribs, of which the middlemost is stronger than the rest. Petals of an elegant blue colour, and delicate texture.

OBSERVATIONS.

Perennial Flax is found in dry chalk soils in Cambridgeshire, Northamptonshire, Suffolk, and Norfolk; flowering from June to August.

Ray has distinguished the trailing from the erect plant, but they are probably no more than varieties. Ray himself hints as much, and Hudson affirms that he has gathered both from the same root. He adds, that in the first the stamens are shorter than the styles, in the second longer.





SPECIES.

Linum catharticum. *Purging Flax.*

Lin. spec. 401. *Huds. angl.* 134. *Wither. arr.* 330.

Relb. cant. n. 254. *Curtis lond. fasc.* 3. *Pollich.*

pal. 320. *Hall. belv. n.* 839. *Fl. dan. t.* 851.

Blackw. 368. *Ger. emac.* 560. 5. *Park. theat.*

1336. 10. *Petiv. brit.* 55. 12. *Baub. hist.* 3.

455. 2. *Raii hist.* 1076. 21. *syn.* 362.

SPECIFIC CHARACTER.

Leaves opposite, ovate-lanceolate, stem dichotomous, corollas acute.

DESCRIPTION.

ROOT annual. Stem from 3 to 9 inches high, upright, round, smooth, branched at top. Leaves smooth, glaucous, quite entire, opposite, but on the tops of the branches alternate. Flowers white, hanging down before they open. Filaments united, and forming a bag which incloses the lower half of the germ.

OBSERVATIONS.

Purging Flax or dwarf wild Flax, called in some places Mill-mountain, is very common in dry hilly pastures, and is sometimes found in meadows. It flowers from May or June to August.

The husbandman may not be sorry to know that a hand-

ful of the fresh plant, or two drams of it dry, is an excellent purge ; acts as a diuretic, and is of service in obstinate rheumatisms. Horses, sheep, and goats are said to eat it.



Stemmy, Engestr. & P. Schultze, Augt. 1871, 19. B. 22. N. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

ECHIUM.

PENTANDRIA Monogynia.

GENERIC CHARACTER.

Corolla irregular, with the mouth naked.

SPECIES.

Echium vulgare. Common Viper's Bugloss.

Lin. spec. 200. *suec. n.* 168. *Huds. angl.* 83.

Wither. arr. 200. *Lightf. scot.* 136. *Relb.*

cant. n. 155. *Tourn. par. edit. angl.* 1. 233.

Hall. belv. n. 603. *Scop. carn. n.* 200. *Pollich.*

pal. n. 193. *Krock. files. n.* 292. *Fl. dan. t.*

445. *Rivin. mon. t. 7. f.* 1. *Blackw. herb. t.*

299. *Clus. hist. 2.* 143. *Matth.* 996. *Dod.*

pempt. 631. 1. *Lob. obs. 312. 2.* *Ger. emac.*

802. 2. *Park. theat. 414. 1.* *Mor. hist. f. 11.*

t. 27. f. 1. row. 3. Raii hist. 498. syn. 272.

SPECIFIC CHARACTER.

Stem tubercled and hispid; stem-leaves lanceolate and hispid; flowers in lateral spikes.

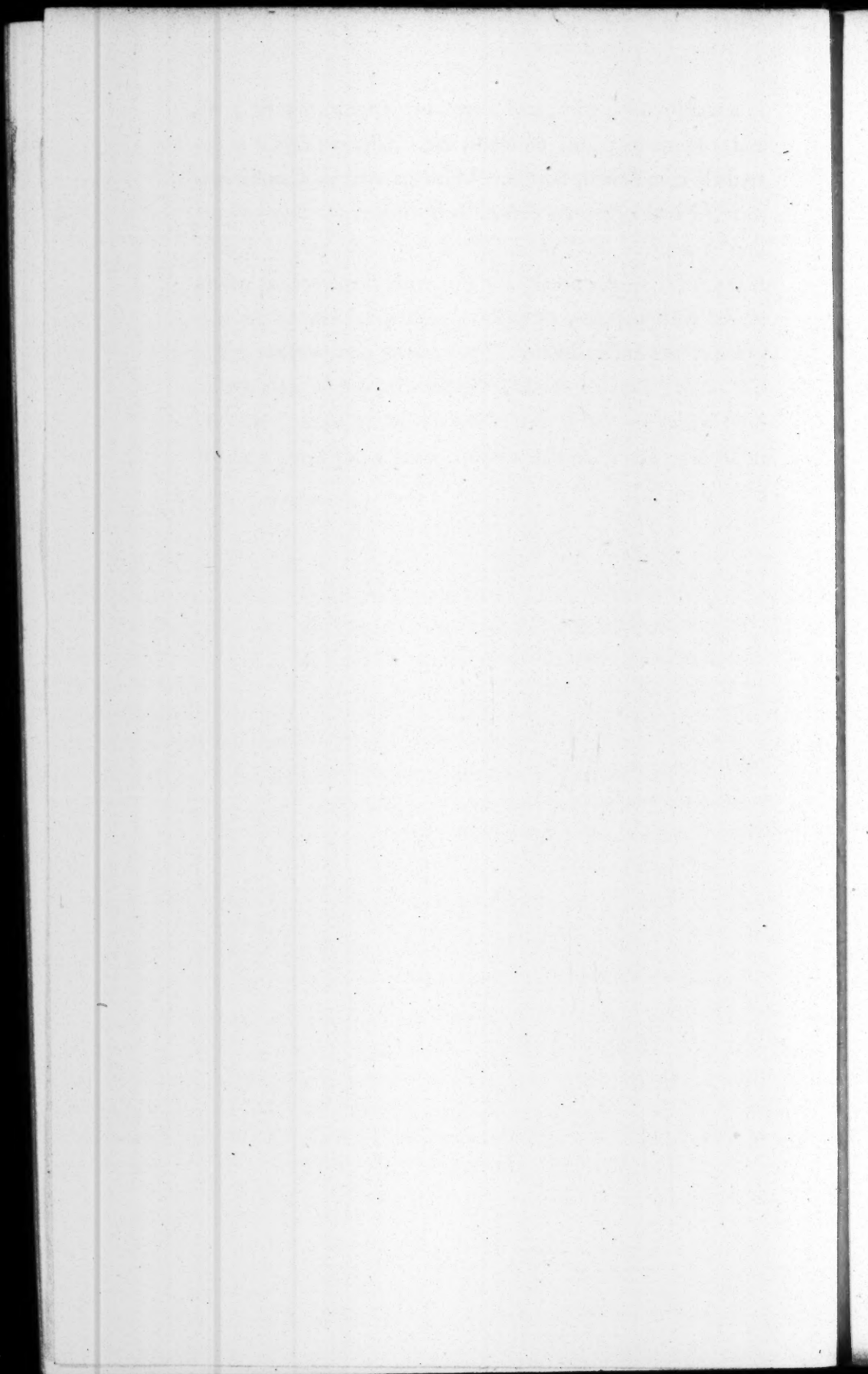
DESCRIPTION.

ROOT biennial. Stem upright, 18 inches or more in height; when young single, but becoming afterwards branched. The whole plant is rough with hairs. The stem frequently, and sometimes the leaves, are beautifully spotted with red. The hairs on the stem spring from glossy tubercles, what form the spots. The root-leaves come out in a tuft, near two feet in diameter, and are petioled. The stem-leaves are sessile, four or five inches long; all lanceolate, quite entire, rugged and hairy on both sides. Flowers numerous in spikes; those of each spike pointing one way, and closely wedged together. Calyx fringed with white hairs. Corolla, before it expands, of a fine red; afterwards of a bright blue. The colour, however, varies to pale red and white. If the corolla be blue, the stems are blueish, the stamens purple, and the bulbs from which the hairs spring are blood-red; but if the corolla be pale red, then the other parts of the flower are of the same colour, and the hair-bulbs are yellow; and if it be white, all the parts of the flower are of that colour, and the hair-bulbs green. The outside of the corolla has short hairs on it, and is marked with five ribs from the middle of each segment to the base; the upper and lateral segments are rounded, the lowest pointed. The filaments are red, sometimes much longer than the corolla, sometimes very little longer, or barely equal to the upper segment. Anthers gray. Germs bedded in a fleshy receptacle. Style very hairy.

OBSERVATIONS.

Viper's Bugloss is a very showy plant, and if it were not common, would probably have a place in our gardens. It

is a weed among corn, and sometimes appears among grafs, and is found by paths, on walls, &c. Linneus fays it is extremely common in Scania. With us alfo in Cambridgefhire, it is the common peft of the fpring corn: they obferve that it appears moft plentifully every third year, and then many fields appear as entirely blue with this weed, as others do red with poppies, or yellow with charlock, to the difgrace of the hufbandman. The country people there call it *Cat's-tail*. Bees are fond of the flowers, but it is faid that their wings are apt to be torn by the ftrong hairs. No cattle feem to eat it, and no wonder, confidering what a rough hairy plant it is.





Drawn, Engraved & Published, Aug^o 1795, by R. B. Nodder, N^o 5 Brewer Street, Golden Square.

PRUNELLA.

DIDYNAMIA *Gymnospermia*.

GENERIC CHARACTER.

Filaments forked, one of the divisions only having an anther. *Stigma* bifid.

SPECIES.

Prunella vulgaris. Common Self-beal.

Lin. spec. 837. *Huds. angl.* 264. *Wither. arr.* 631. *Curtis lond.* 4. 42. *Lightf. scot.* 321. *Relb. cant. n.* 450. *Hall. belv. n.* 277. *Scop. carn. n.* 715. *Pollich. pal. n.* 577. *Villars dauph.* 2. 396. *Krock. files. n.* 964. *Mill. fig. t.* 69. f. 2. *Blackw. herb. t.* 24. *Rivin. mon. t.* 29. f. 1. *Dod. pempt.* 136. 1. *Lob. obs.* 251. 3. *ic.* 1. 474. 2. *Fuchsf.* 621. *Matth.* 963. *Ger.* 507. 1. *emac.* 632. 1. *Park.* 1680. 1. *Mor. hist. f.* 11. t. 5. f. 1. *row.* 1. *Petiv. brit. t.* 32. f. 11. *Baub. hist.* 3. 428. 2. *Raii hist.* 551. *syn.* 238.

SPECIFIC CHARACTER.

All the leaves ovate-oblong, ferrate, petioled.

DESCRIPTION.

ROOT annual, small, with many long fibres. Stem inclining to be square, but not regularly so, with a deep groove on each side, hairy, and purplish, especially towards the top: branches a pair at each joint, rising upwards. Leaves in pairs, rough, with little prominent points on the upper surface, and the nerves of the lower sometimes slightly indented about the edge, and sometimes not, beset with short hairs; petioles channelled above and hairy along the edges. At the top of the stem, and the end of each branch, is a subcylindrical spike of flowers, truncate at top, the largest an inch in length; at the foot of it is a pair of sessile leaves, and in opposition with them a pair of heart-shaped, broad, pointed bractes, membranaceous, white, with green veins, fringed and purple round the edge, smooth and shining above, but having scattered white hairs underneath: there is a pair of similar bractes between each of the whorls that compose the whole spike, and each whorl has six flowers. Calyx somewhat longer than the bractes; upper lip broad, flat, truncate, with three small teeth, one on each side, and a third in the middle, ribbed, edges fringed, purple except at the base; lower lip narrower, cloven; the clefts acuminate, ribbed, hairy at the base, purple at top. Corolla violet-coloured, with a white tube, easily falling; upper lip villose on the outside, slightly notched at the end; the middle segment of the lower lip is finely toothed. Stamens light violet, forked; anthers two-lobed, placed on the inner fork. Seeds ovate, small, obtusely angular, smooth, brown, terminated by a white point.

This plant varies much in size, from a finger's length, in open exposed situations, to a foot and even eighteen inches

in height, when drawn up in meadows and woods; in the former case it is trailing, in the latter it grows upright, but still with a flexuose or bending stem, branching little, and have very long internodes. The whole plant is usually thinly set with hairs. The calyx is of a singular structure, and closes to protect the seeds. The corolla varies to red and to white.

OBSERVATIONS.

Self-heal is common in pastures and meadows, flowering from June to August. According to Linneus, kine, sheep, and goats eat it, but horses refuse it. Being astringent, it was formerly used in fluxes, and was considered as one of the best vulnerary herbs, but it is now out of use.

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RHINANTHUS.

DIDYNAMIA Angiospermia.

GENERIC CHARACTER.

Calyx bellying, four-cleft. *Capsule* two-celled,
blunt, compressed.

SPECIES.

Rhinanthus Crista galli. *Yellow Rattle*, or *Cock's-comb*.

Lin. spec. 840. *suec. n.* 542. *Huds. angl.* 268.
Wither. arr. 634. *Lightf. scot.* 322. *Relb.*
cant. n. 453. *Pollich. pal. n.* 579. *Krock. files.*
n. 968. *Hall. belv. n.* 313. *Scop. carn. n.* 751.
Rivin. mon. t. 92. *f.* 2. *Dod. pempt.* 556. 1.
Lob. obs. 285. 2. *ic.* 1. 529. 2. *Ger.* 912. *emac.*
1071. 1. *Park. theat.* 713. 2. *Mor. hist. f.* 11.
t. 23. *f.* 1. *row.* 2. *Petiv. brit. t.* 36. *f.* 2.
Bauh. hist. 3. 436. 3. *Raii hist.* 769. *syn.**
284.

SPECIFIC CHARACTER.

Upper lip of the corolla compressed and shorter.

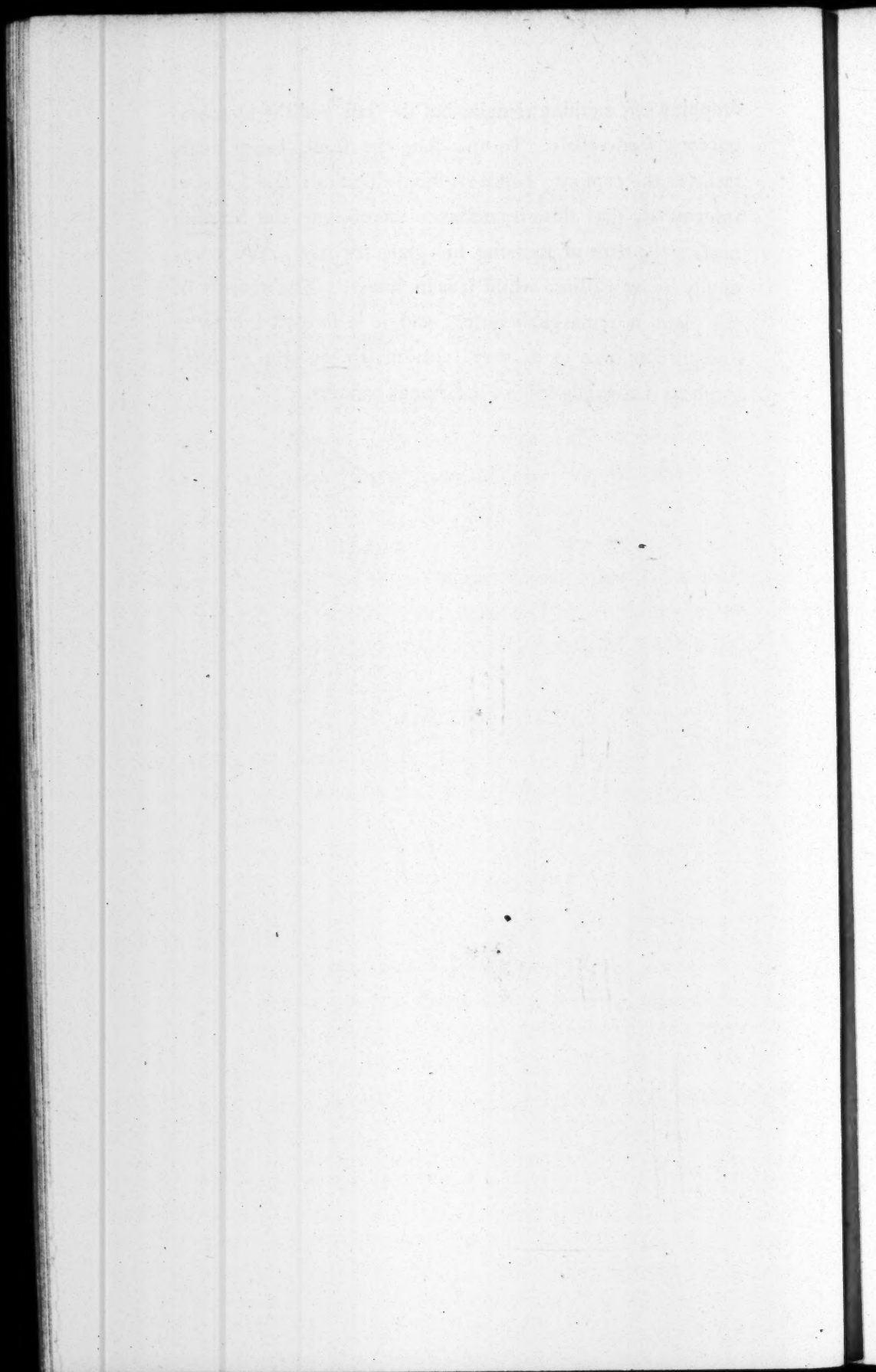
DESCRIPTION.

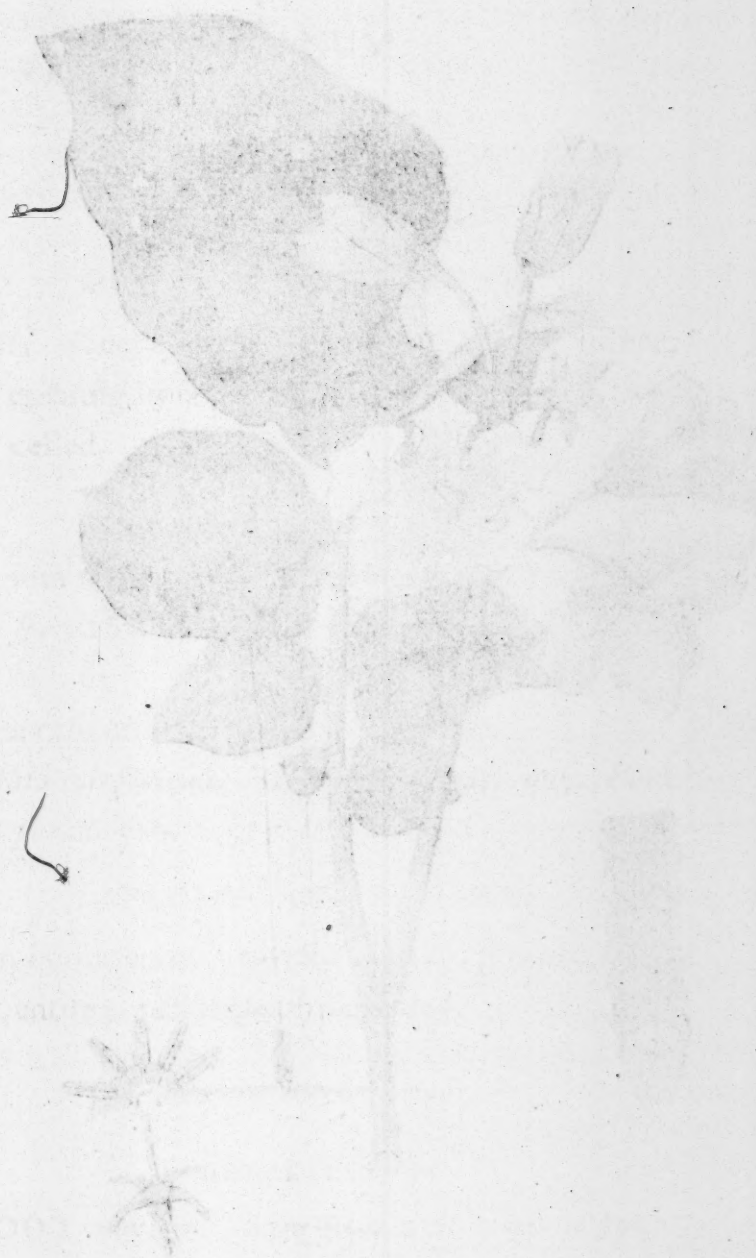
ROOT annual, small, with few fibres. Stem four-cornered, smooth, upright, rigid, sometimes single, sometimes branched, with long narrow purple spots on it. Leaves opposite, lanceolate, sessile, marked with parallel nerves, terminating in the serratures, underneath beautifully reticulated with white tubercles, deeply ferrate. Bractes like the leaves, but broader at the base, and more deeply cut in; the notches pointed. Flowers on short peduncles, solitary, forming a sort of terminating spike. Calyx remarkably large, inflated, of a pale green colour. Corolla yellow, except the tube, which is white, and widens at bottom; upper lip flattened, notched at the end, the anterior edge blueish on each side; lower trifid, the lateral segments flat and wrinkled, the middle one larger, rolled in at the edges. Anthers hairy. Germs smooth, surrounded at the base by a membranaceous nectary, and in the front a short thick crooked horn-shaped gland; style white, but just below the stigma dark blue; stigma yellowish green, slightly notched. Capsule bordered at the edge, and terminating in a short point.

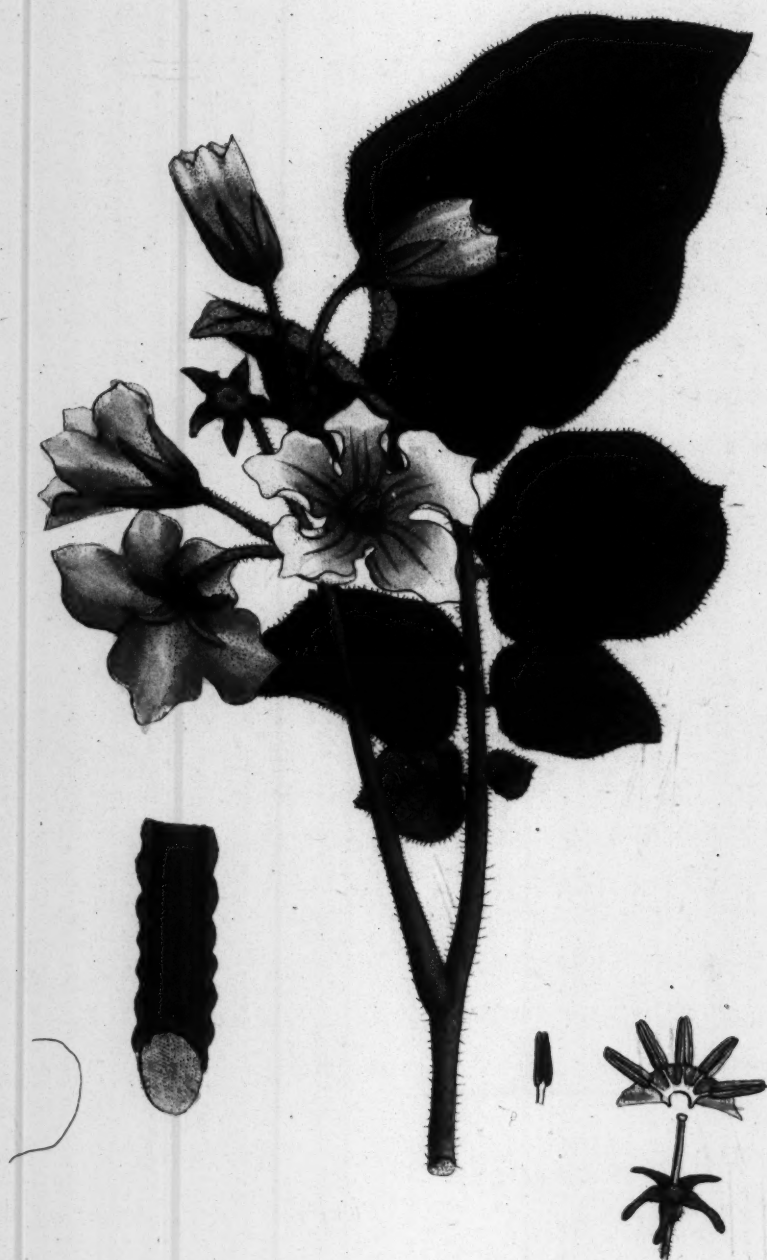
OBSERVATIONS.

Yellow Rattle is common in pastures, and flowers early in June. It is known in some counties by the name of Penny-grass. Horses, sheep, and goats are said to eat it, and kine to refuse it. Others affirm that cattle in general at liberty refuse it, but that they will eat it in the stall or stable; others again, that they will eat it when fresh, but reject it when dry among hay. As it comes early, it is usually far advanced when grass is mowed, and the leaves

dropping off, nothing remains but the stalk and the membranaceous seed-vessels. In this state the seeds, being loose, rattle in the capsule; hence its English name: and Linneus informs us, that this circumstance indicates to the Swedish peasant the time of mowing his grass for hay. We commonly mow earlier, whilst it is in flower. The growth of this plant is remarkably quick, and it is supposed in some foreign countries to be very injurious to the crop of Rye. With us it abounds only in indifferent pastures.







Drawn, Engraved & Published Sept. 1795, by F. R. Nodder At the Brewer Street, Golden Square.

SOLANUM.

PENTANDRIA Monogynia.

GENERIC CHARACTER.

Corolla wheel-shaped. *Anthers* slightly joined, opening by a double pore at top. *Berry* two-celled.

SPECIES.

Solanum tuberosum. Common *Potatoe*.

Lin. spec. 265. *Baub. pin.* 167. *prodr.* 89. *fig.* *Raii hist.* 675.

Lycopersicon tuberosum. *Mill. dict.*

Battata virginiana. *Ger.* 781. *emac.* 927. *Park. parad.* 516. *t.* 517. *f.* 3.

SPECIFIC CHARACTER.

Stem herbaceous, unarmed; leaves pinnate, quite entire; peduncles subdivided.

DESCRIPTION.

ROOT tuberous. Stem from 2 to 3 feet in height, succulent, somewhat angular, striated, slightly hairy, frequently spotted with red, branched, the branches long and

weak. Leaves interruptedly pinnate, having 3 or 4 pairs of leaflets, with smaller ones between, and one at the end larger than the rest; the leaflets are somewhat hairy, and dark green on the upper surface. The flowers are either white or tinged with purple, or, as old Gerarde describes them, of a light purple, striped down the middle of every fold or welt, with a light show of yellowness. The fruit is a round berry, the size of a small plum, green at first, but black when ripe. Seeds many, small, flat, roundish, white.

OBSERVATIONS.

The Potatoe, now so well known, appeared at the end of the 16th century, two hundred years ago, as a curiosity in botanic gardens. Gerarde (in 1597) informs us, that he received roots of it from Virginia, otherwise called Norembega, which grew and prospered in his garden, as in their own native country. He calls it Potatoe of Virginia, to distinguish it from the Spanish Potatoe, (*Convolvulus Battatas*) which was then much better known, and called exclusively Potatoe, Potatus or Potades, from the Spanish Battata.

The best accounts say that our modern Potatoe was first introduced into culture here, or probably in Ireland, by the celebrated Sir Walter Raleigh. Mr. Miller says about the year 1623; but Sir Walter returned from Virginia in 1584, and he either brought it with him, or it was sent to him soon after.

Much confusion has arisen from the authors of voyages and travels not having distinguished the Spanish Potatoe, or original Battatas, from the Virginian, or our now common sort, which derived its name Potatoe only from the similitude of the root to the other. Parkinson (in 1629) has three kinds of Potatoe; the Spanish, (*Convolvulus Battatas*) the

Virginian, which some, as he says, foolishly call Apples of Youth, (*Solanum tuberosum*) and the Canadian, which, says he, we in England, from some ignorant and idle head, have called Artichokes of Jerusaleme (*Helianthus tuberosus*). The latter, in his time, seems to have been almost as commonly cultivated as the Virginian Potatoe is now.

Virginia, which forms, with the Potomac, the
boundary between the State and the District of
Columbia. It is a small stream, but it is
very important, as it is the only one of the
kind in the State. It is called the
Potomac, in its lower course, and the
Potomac, in its upper course. It is
called the Potomac, in its lower course,
because it is the only one of the kind
in the State. It is called the Potomac,
in its upper course, because it is the
only one of the kind in the State.



CANNABIS.

DIÆCIA Pentandria.

GENERIC CHARACTER.

MALE. Calyx five-parted. Corolla none.

FEMALE. Cal. one-leafed, entire, gaping on one side. Cor. none. Styles two. Nut bivalve within the closed calyx.

SPECIES.

Cannabis fativa. Common Hemp.

Lin. spec. 1547. *Hall. herb. n.* 1616. *Blackw. herb. t.* 322. *Mill. fig. t.* 77. *Ger.* 572. *emac.* 708. *f.* 1, 2. *Park. theat.* 598. *Baub. hist.* 1. 447. *f.* 448. *Raii hist.* 158.

DESCRIPTION.

ROOT annual. Stem the height of a man or more, branched, hairy, as are also the leaves, which are digitate, slender, serrate; the leaflets seven, the outer ones smallest. In the female plant the flowers are solitary in the axils: in the male they are in thin pendulous spikes, at the ends of the stem and branches.

OBSERVATIONS.

Some female flowers are frequently found among the males, and some males among the females? it is therefore no objection to the sexual system, that female plants have produced perfect seed, when no male plants have been near them. All the old writers in botany, blindly following the ancients, call the male plants female, and the females male: the mistake is still continued among the practical cultivators, who call the male plants fimble, femble, or thimble-hemp, which is evidently a corruption of female.

Like most plants in general cultivation, it is difficult to ascertain its native country; we may, however, trace it, with many others, to the East.

The uses of Hemp for a variety of linen cloths, and its importance to the navy for sails and cordage, are well known. An oil is extracted from the seeds, and the seeds themselves are a common food for small birds, and are said to occasion hens to lay a greater quantity of eggs.

Hemp is esteemed a cleansing crop, but a great exhauster of land, at least if it stands for seed.



CORIANDRUM.

PENTANDRIA Digynia

GENERIC CHARACTER.

Corolla radiate; petals inflex-emarginate. *Involute* universal, one-leaved: partial, halved.
Fruit spherical.

SPECIES.

Coriandrum sativum. Common Coriander.

Lin. spec. 367. *Huds. angl.* 123. *Wither. arr.* 302.
Engl. bot. t. 67. *Woodv. med. bot.* 492. *t.* 181.
Hall. belv. n. 764. *Krock. files. n.* 444.
Blackw. herb. t. 176. *Rivin. pent. t.* 70, 71.
Mor. hist. f. 9. *t.* 11. *f.* 1. *Ger.* 859. *emac.*
1012. f. 1. *Park. theat.* 918. *f.* 1. *Raii hist.*
470. syn. 221.

SPECIFIC CHARACTER.

Fruit spherical.

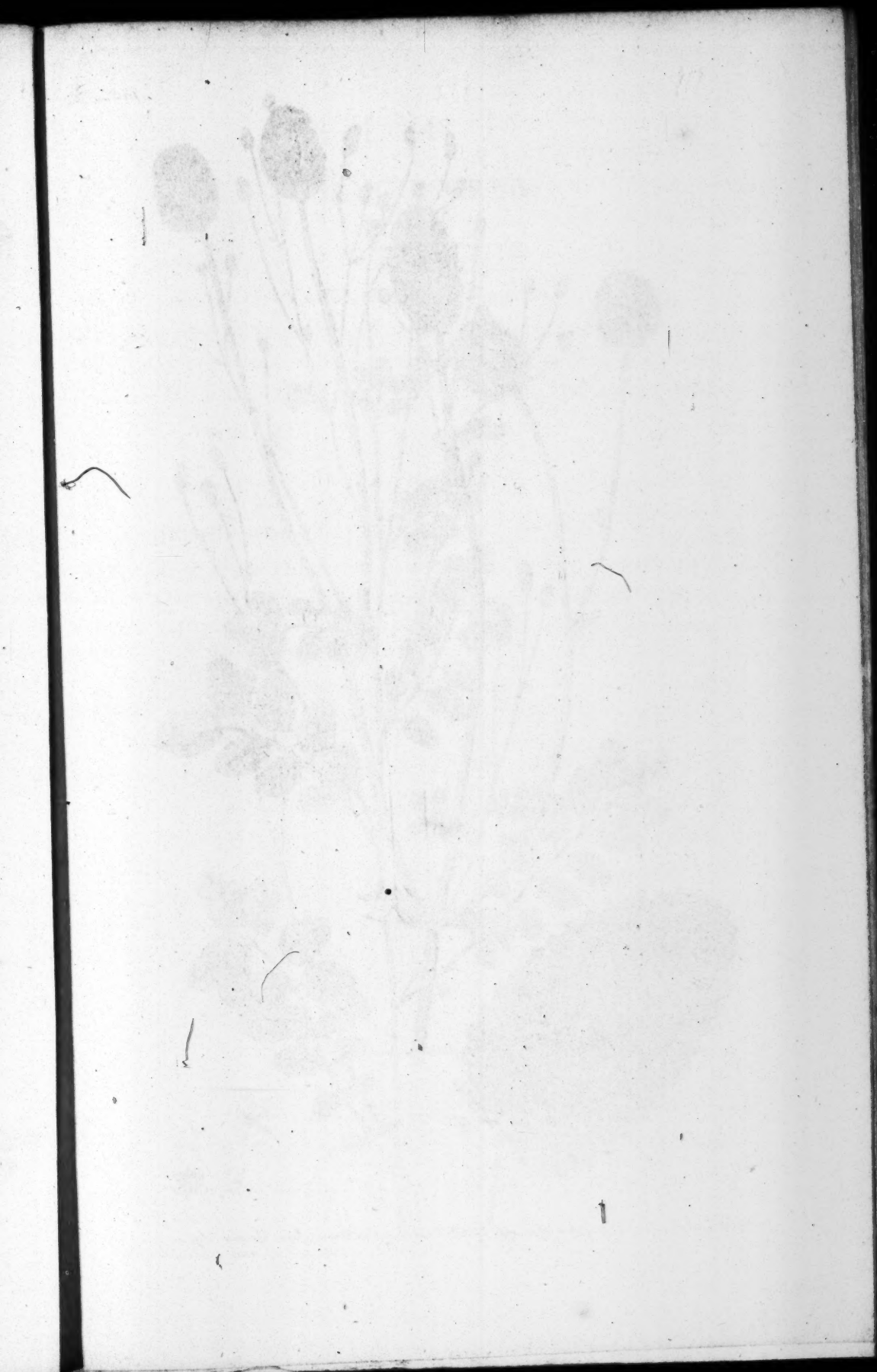
DESCRIPTION.

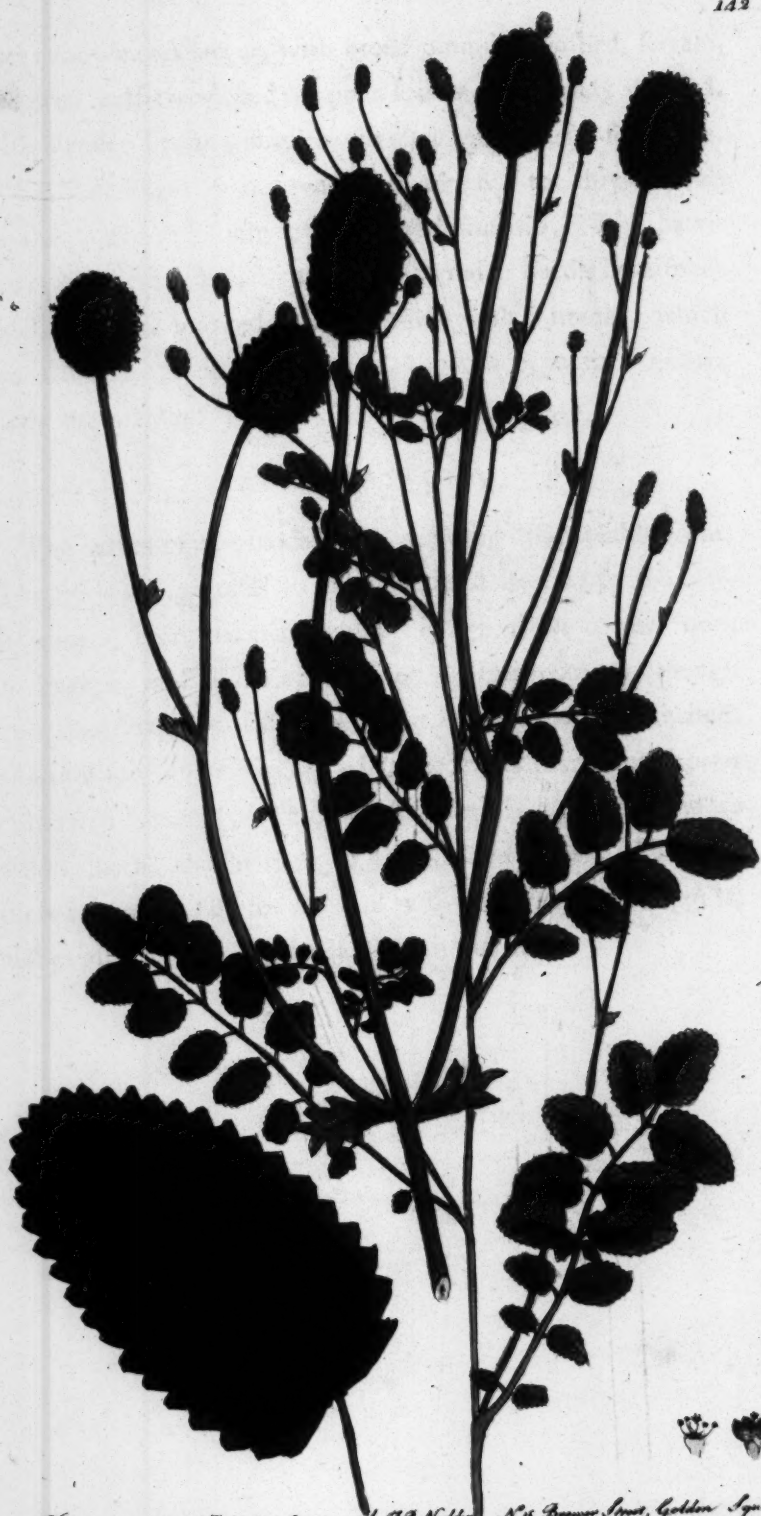
ROOT annual, small. Stem from a foot to eighteen inches in height, smooth and branched. Leaves doubly pin-

nate: root-leaves larger, with broad pinnules, gashed, ferratè, and even half-two-lobed: upper leaves very finely divided, with slender linear pinnules, divided into 2 or 3 segments. Sometimes there is no general involucre; the three leafflets of the partial involucre are small and filiform. The petals are either pure white, or tinged with red. Seeds hemispherical, smooth, marked on the outside with 6 streaks, which are scarcely visible, concave on the inside, with a groove along the middle.

OBSERVATIONS.

The leaves of Coriander have a strong disagreeable scent. The seeds are grateful to the taste, and are sold by the confectioners, incruſted with ſugar. It is a native of the South of Europe, and of Asia, but not of this country, though now found wild in Eſſex, where it has been long cultivated, and in a few other places, where probably it may have been cultivated formerly. In the Eaſt Indies it is much uſed as a ſalad herb, and in moſt of their made diſhes. With us there is a ready ſale for the ſeed with the diſtillers, druggiſts, and confectioners; particularly with the ſiſt.





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SANGUISORBA.

TETRANDRIA Monogynia.

GENERIC CHARACTER.

Cal. four-leaved. *Germ.* between the calyx and corolla.

SPECIES.

Sanguisorba officinalis. Great Burnet.

Lin. spec. 169. *Huds. angl.* 65. *Witber. arr.* 147.
Relb. cant. n. 119. *Hall. helv. n.* 705. (Pimpinella.) *Scop. carn. n.* 166. *Pollich. pal. n.* 164. *Krock. files. n.* 243. *Fl. dan. t.* 97.
Sabb. hort. 2. t. 70. *Mor. hist. f.* 8. *t.* 18. *f.* 7.
Petiv. brit. t. 4. *f.* 11. *Dod. pemp.* 105.
Lob. obs. 412. 4. *Matth.* 1033. *Ger.* 889. 2.
emac. 1045. 2. *Park. theat.* 582. 3. *Baub. hist.* 3. 120. *Raii hist.* 402. 2. *syn.* 203. 2.

SPECIFIC CHARACTER.

Spikes ovate.

DESCRIPTION.

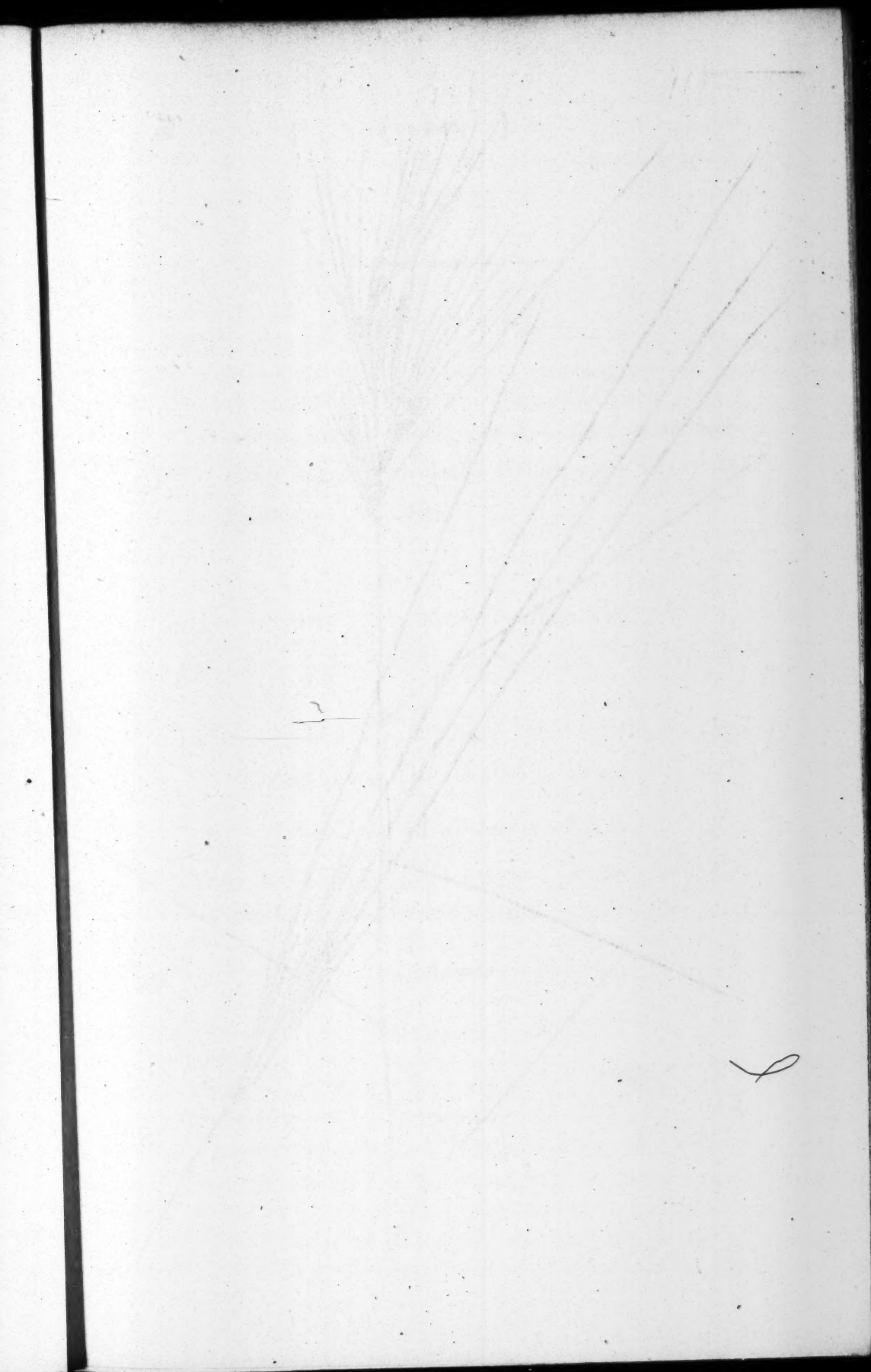
ROOT perennial. Stalk three feet high and more, somewhat angular, smooth. Leaves pinnate, alternate, smooth;

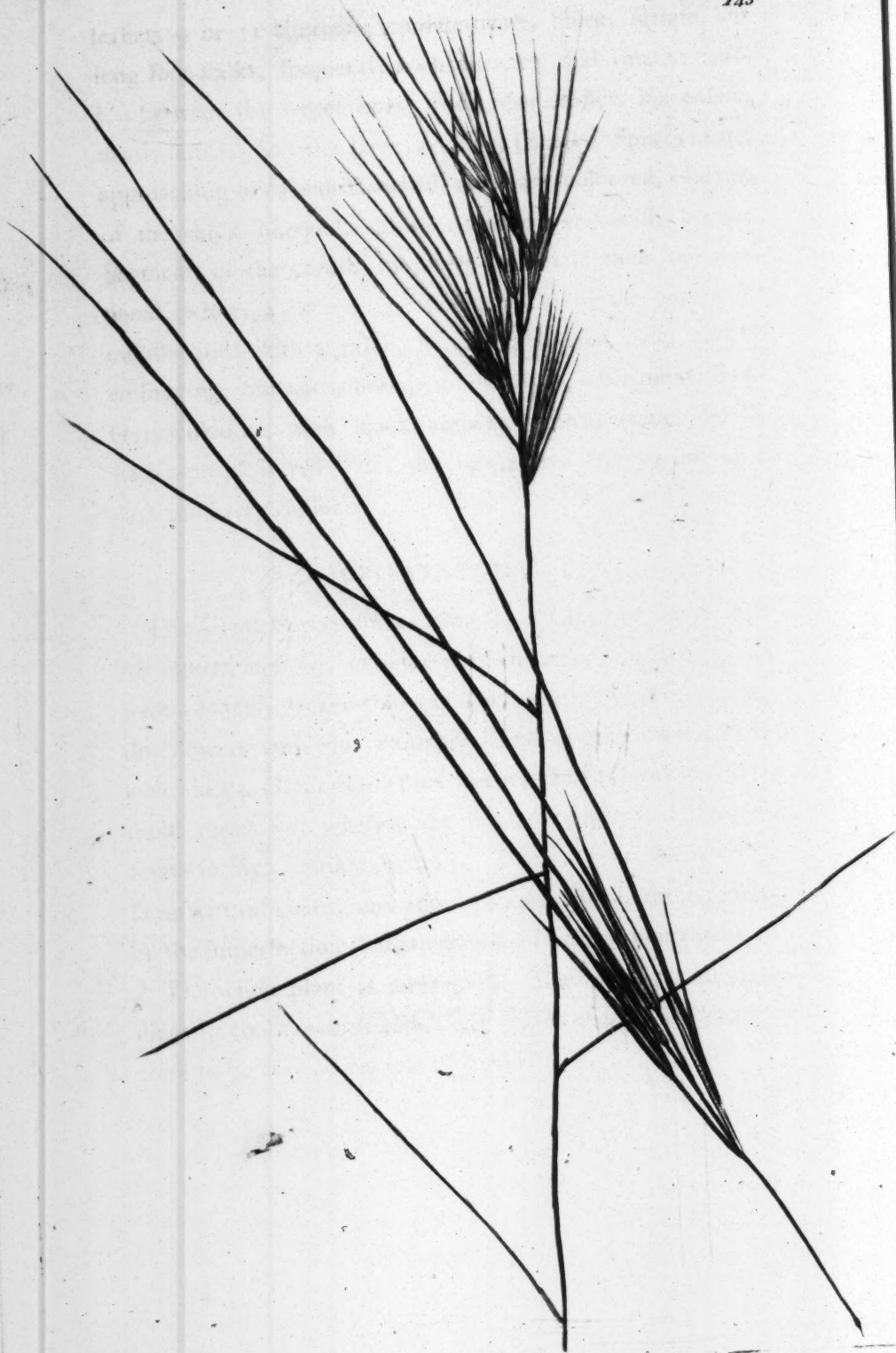
leaflets 9 or 11 alternate, cordate-ovate, blunt, ferrate, on long foot-stalks, frequently with auricles, and smaller leaflets between the larger ones; the upper leaflets lanceolate, nearly sessile. Stipules large, cordate, ferrate. Spikes ovate, approaching to cylindric, naked, mulberry-coloured. Leaves of the calyx unequal, skinny, woolly, yellowish brown. Segments of the corolla mulberry-coloured; tube four-cornered, white, a little hairy, fleshy, inclosing the germ; its mouth filled with a thick, flattish, glandular ring, closely embracing, but not adhering to the style. Filaments mulberry-coloured, with black anthers. Germ ovate, small, with a purplish red style; the stigma is a fringed tuft of a dark mulberry colour.

OBSERVATIONS.

The Great Burnet differs from the small or common Burnet figured at t. 69, in being a much larger and taller plant, with a longer, darker-coloured spike, containing hermaphrodite flowers with four stamens. The upper flowers, however, in the Great Burnet are imperfect. It grows also in moist meadows; whereas the small or cultivated Burnet is found in high chalky pastures. They are evidently of the same natural genus, and afford us an instance, among many, of the imperfection that attends all artificial arrangements.

The whole plant is astringent. The leaves are an ingredient in cool tankards and salads. It is coarse, and does not seem to be very acceptable to cattle.





STIPA.

TRIANDRIA Digynia.

GENERIC CHARACTER.

Cal. two-valved, one-flowered. *Cor.* with the outer valve terminated by an awn which is jointed at the base.

SPECIES.

Stipa juncea. *Rush-leaved Feather-Grass.*

Lin. spec. 116. *Scop. carn. n.* 123. *Hall. helv. n.* 1513. a.

Festuca juncea folio. *Baub. pin. 9. theat.* 145. *Scheuch. gran.* 151. *Raii hist.* 1291.

SPECIFIC CHARACTER.

Awns naked, straight; calyxes longer than the seed; leaves smooth within.

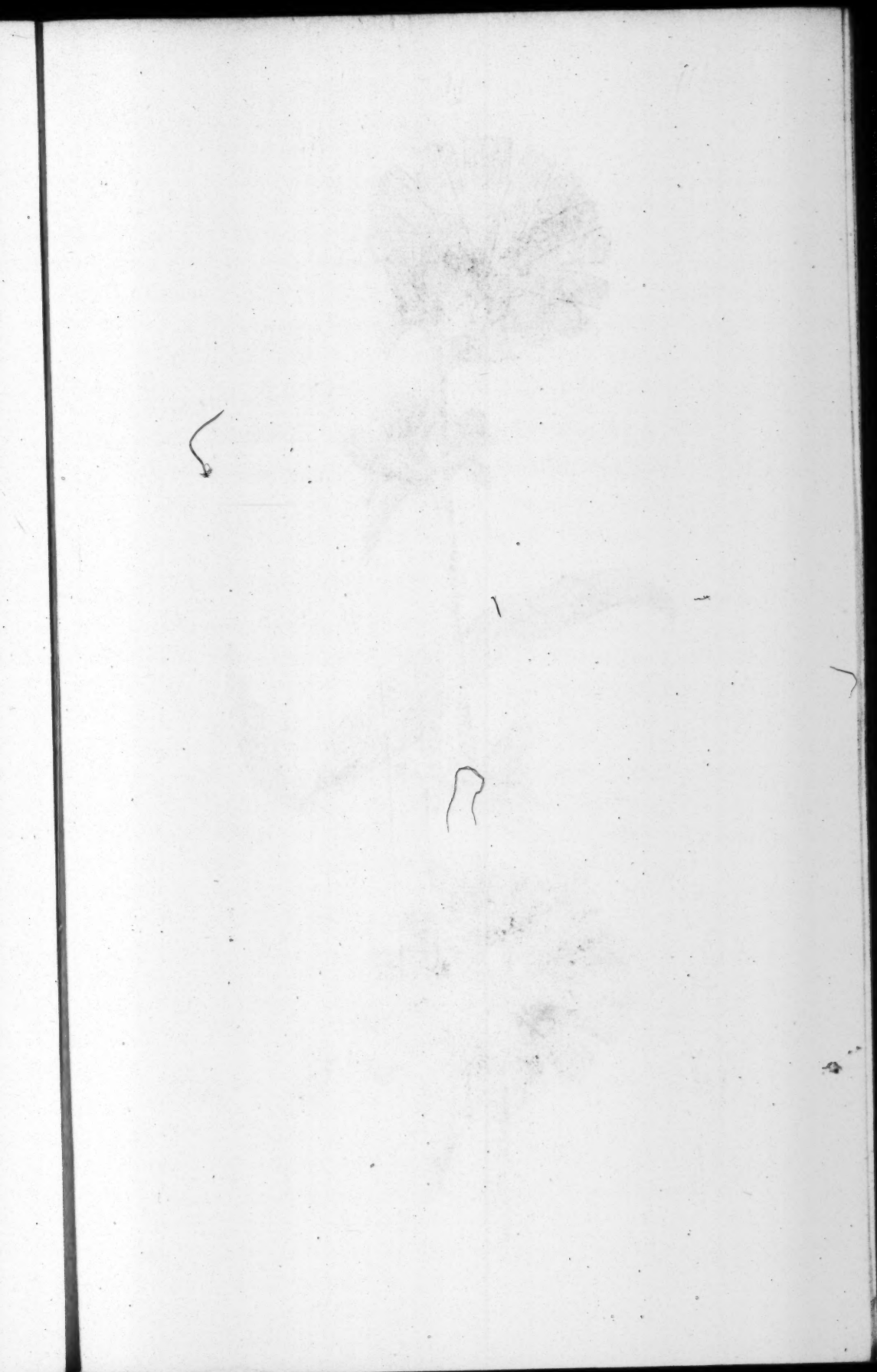
DESCRIPTION.

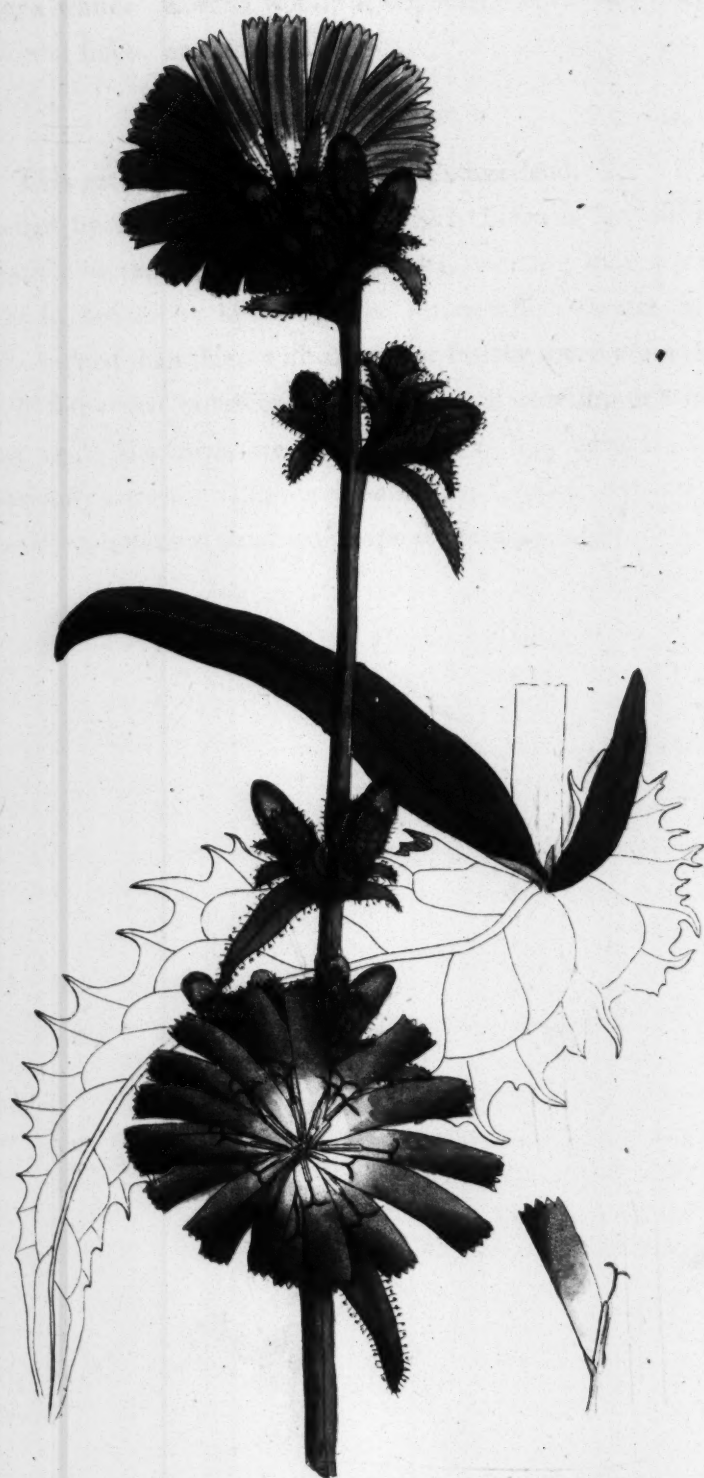
THIS is a tall handsome grass, three feet high. The leaves, like those of the rush, rolled up into a round form, with a longitudinal groove. The spike is very long and narrow, and issues from a convoluted leaf, as from a sheath.

Calyx white. Corolla woolly at the base. Awn very long, without hairs, and straight.

OBSERVATIONS.

This grass is a native of France, Switzerland, &c. It is joined by Haller with another, which Linneus has distinguished by the name of *Stipa capillata*, which is indeed very like it, but differs in having the leaves stiffer, shorter, and less rugged than this, with the upper surface more unfolded, and somewhat pubescent. The calyx is reddish, or a bay colour. The awns are shorter, and, as they advance, are variously curved. They are handsome Grasses, but are of too dry a nature to be of much use for feeding cattle.





CICHORIUM.

SYNGENESIA *Polygamia Æqualis.*

GENERIC CHARACTER.

Cal. calyced. Down slightly five-toothed, obscurely hairy. *Recept.* somewhat chaffy.

SPECIES.

Cichorium Intybus. Succory.

Lin. spec. 1142. *Huds. angl.* 348. *Wither. arr.* 862.

Curt. lond. 4. t. 56. *Hall. belv. n.* 1. *Scop.*

carn. n. 991. *Pollich. pal. n.* 758. *Fl. dan. t.*

907. *Blackw. t.* 183. 177. *Baub. hist.* 2. 1007.

f. 1008. *Raii hist.* 255. *Ger. emac.* 284. 1.

Park. theat. 776. 2. *Mör. hist. f.* 7. t. 1. f. 2.

SPECIFIC CHARACTER.

Flowers twin sessile, leaves runcinate.

DESCRIPTION.

ROOT perennial. Stalk from one to three feet in height when wild, more when cultivated, upright. Leaves next the root numerous, runcinated, roughish: those on the stalk smoother, alternate, half surrounding the stalk, lanceolate,

toothed towards the base, fringed with bristly hairs, the teeth and ends having a sharp stiff awn. Flowers generally in pairs, sessile in the bosom of the upper leaves, of a fine blue colour. Seeds obovate, irregularly five-cornered, flattened a little, obscurely streaked, smooth, straw-coloured.

OBSERVATIONS.

Succory, or Chicory, has generally been regarded as a weed; it has, however, for several years past, been cultivated in France as food for cattle, and was introduced here for that purpose by Arthur Young, Esq. in the year 1788. In Lombardy it is reputed to increase both the milk and flesh of cattle, and to be very nutritious when made into hay; it is an important object for summer-foiling horses and cattle; and it is freely eaten by sheep.

This plant is abundantly more large and succulent in cultivation than in its wild state. The stalks are so thick and stiff as to support themselves against winds and the heaviest rains; it defies drought, being of early growth, and the first large spreading leaves covering the ground, so as to retain the moisture; the most severe cold does not injure it; it grows fast, and furnishes abundance of salutary fodder at a season when green food is scarce. Two cuttings may be made of it the first year, and three or four, according to the season, every year after; either in April, June, August, and October, or in May, July, and October; or it may be cut constantly and gradually for foiling every day as it is wanted, and thus yield a constant supply of fresh food during 7 or 8 months. Observe not to let it stand till it becomes hard and sticky. In our moist climate, this succulent plant seldom dries well for hay, unless the season be very favourable.

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